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**CULTURAL RESOURCES INVESTIGATIONS ON GRAND
TERRE ISLAND, JEFFERSON PARISH, LOUISIANA**

Final Report

November 1995

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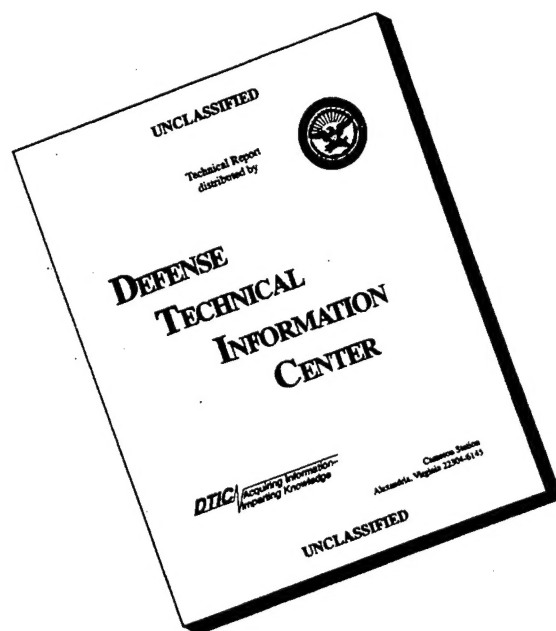
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October 4, 1995

REPLY TO
ATTENTION OF:

Planning Division
Environmental Analysis Branch

To The Reader:

The following report provides the results of cultural resources investigations conducted as part of the Barataria Bay Waterway, Louisiana, Grand Terre Island Restoration project. The purpose of the investigations was to identify and assess the potential impacts to significant cultural resources within areas designated for the beneficial use of dredged material. This effort was designed, funded, and guided by the U.S. Army Corps of Engineers, New Orleans District, as part of our cultural resources management program.

The investigations identified 3 historic archeological sites and 10 magnetic anomalies within the project area. It was determined that 16JE128 and 16JE129, with the associated anomalies 7-10, are eligible for inclusion in the National Register of Historic Places [36CFR60.4 (a-d)]. Anomalies 1-6 and 16JE127 are not eligible, and no further work is recommended. The project will be designed to avoid impacts to those sites considered as significant. The Louisiana State Historic Preservation Officer concurred with this assessment by letter dated July 14, 1995.

This report has been reviewed and accepted by the New Orleans District. We commend the outstanding efforts and careful scholarship of the authors.

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<p>Cultural resources investigations were conducted on Grand Terre Island, Jefferson Parish, Louisiana. Primary source documents including historic maps, aerial photographs, historic accounts, photographic collections were examined in order to identify areas where cultural resources were likely to be preserved within the study area, which encompassed 181 acres. A systematic program of shovel testing, augering, probing, magnetometer survey, metal detector survey, and canal wire drag was then undertaken in high probability areas. No new sites were identified as a result of this effort. In addition, three previously-recorded sites, 16JE127, 16JE128, and 16JE129, were investigated. Site boundaries were determined, <i>in situ</i> cultural deposits were identified, and areas of disturbance were delineated. 16JE127 is recommended as being ineligible for nomination to the NRHP. Both 16JE128 and 16JE129 are recommended as being eligible for NRHP nomination.</p>					
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CHAPTER 1 INTRODUCTION

This report presents the results of cultural resources investigations on Grand Terre, a barrier island fronting Barataria Pass and the Gulf of Mexico, in Jefferson Parish, Louisiana. Grand Terre Island formed a single land mass measuring approximately 9.7 km east/west and 4.8 km north/south as late as 1893. Since then, the island has divided into three islands (Ritchie et al. 1990). Part of the westernmost land mass, which is the largest remaining island, was examined during this project. It currently measures approximately 4 km east/west by 1 km north/south, but the island is rapidly being destroyed by erosion, subsidence, and the effects of repeated hurricanes.

The U.S. Army Corps of Engineers, New Orleans District (NOD) plans to use material from routine maintenance dredging of the Barataria Bay Waterway bar channel to restore portions of the island. Dredge material will be placed into shallow, open water, beach, or upland disposal areas on and adjacent to Grand Terre (Figure 1). When shoal material previously was removed from the bar channel during dredging operations, the material had been deposited in an Ocean Dredged Material Disposal Site (ODMDS). It is anticipated that disposal of the dredged material onto or adjacent to Grand Terre would reduce erosion and other factors of land loss.

Investigations on Grand Terre were undertaken by Earth Search, Inc., pursuant to contract DACW29-94-D-0020, within that portion of the project area identified as having archeological potential (Figure 2). The purpose of investigations was to identify any cultural resources, to provide updates on the condition of two previously recorded sites in the project area, and to provide recommendations for the placement of dredge material (Appendix I). Fieldwork began on April 6 and was completed on April 22, 1995.

Two sites, 16JE127 and 16JE129, were previously recorded within the current project area. A third site, 16JE128, was recorded outside the project area and was found to extend into and beyond the project area during these investigations. 16JE127, the Grand Terre-Pipeline Canal site, is located on the bank of Barataria Bay. Scattered oysters and bricks were visible when the site was originally recorded in 1977. 16JE128, the Lafitte's Settlement site, is located along Barataria Bay west of 16JE127 (Gagliano et al. 1979). The site was recorded in 1977 as an oyster and *Rangia* shell midden containing mocha, hand-painted, and transfer-printed plate and bowl fragments. 16JE129, the Forstall Plantation site, is located on the Gulf of Mexico (Gagliano et al. 1979). No standing structures were extant when the site was recorded in 1977, although remains of the sugar house were observed.

Project Research Requirements

The Scope of Services (Appendix I) calls for the implementation of a three-phase project plan. Phase 1 consisted of the examination of primary source documents including historic maps, aerial photographs, historic accounts, photographic collections, and other relevant archival materials. The purpose of this undertaking was to identify areas where cultural resources were likely to occur, as well as to provide a context for assessing the significance of any sites discovered within the study area as a result of the fieldwork. Two historic canals were selected as the focus of examination. Maps of Grand Terre dating to 1841, 1853, and 1886 show that the Old (or Lafitte) Canal and New (or Plantation) Canal were the only major water courses within the project area during the nineteenth century. Thus, these represented high-probability areas for historic activities. The east/west pipeline canals in the north portion of the island were constructed between the 1930s and 1950s (McBride et al. 1992). These were therefore eliminated from consideration for magnetometer investigations and bankline auger testing since they are recent features of known function.

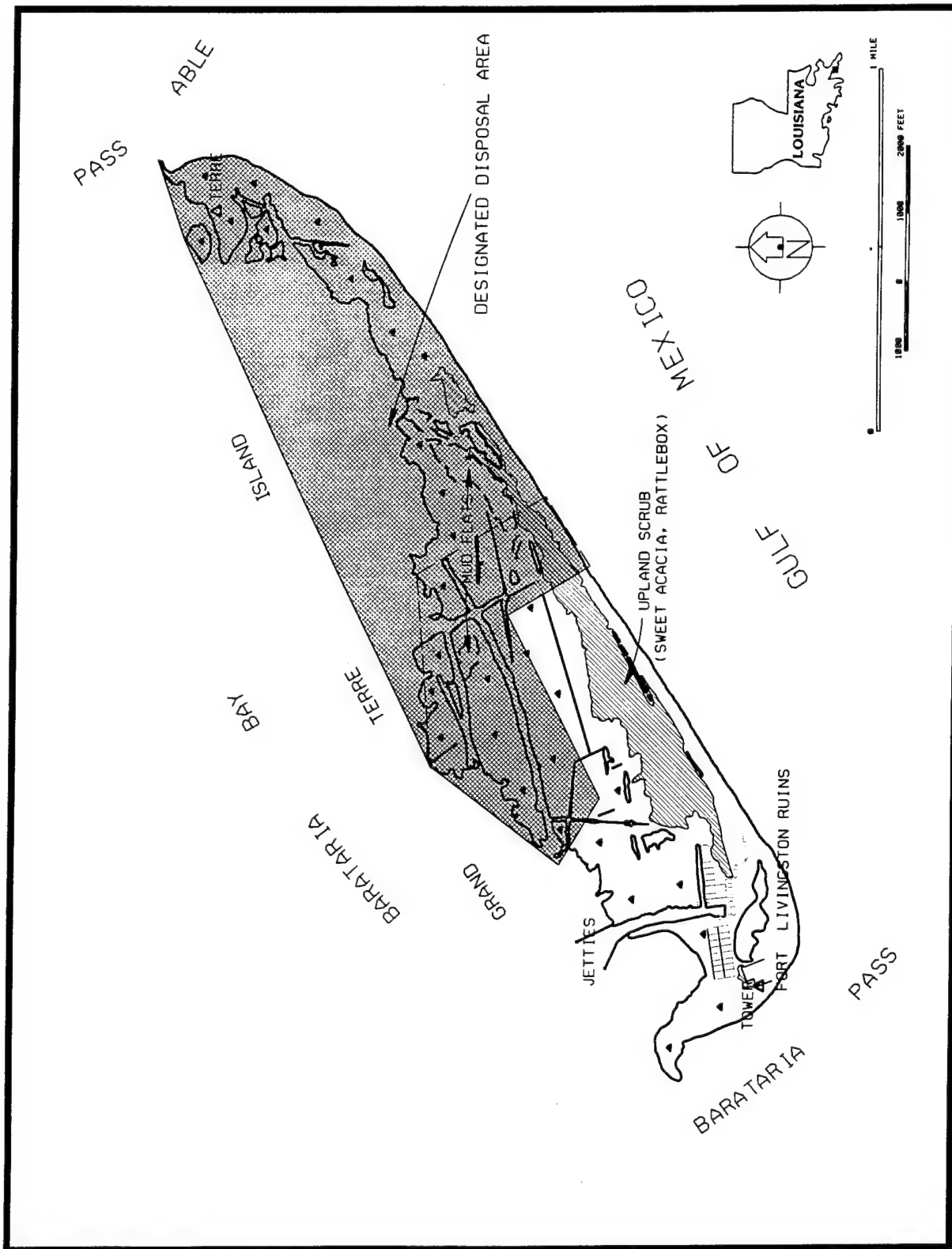


Figure 1. Designated Disposal Area on Grand Terre Island.

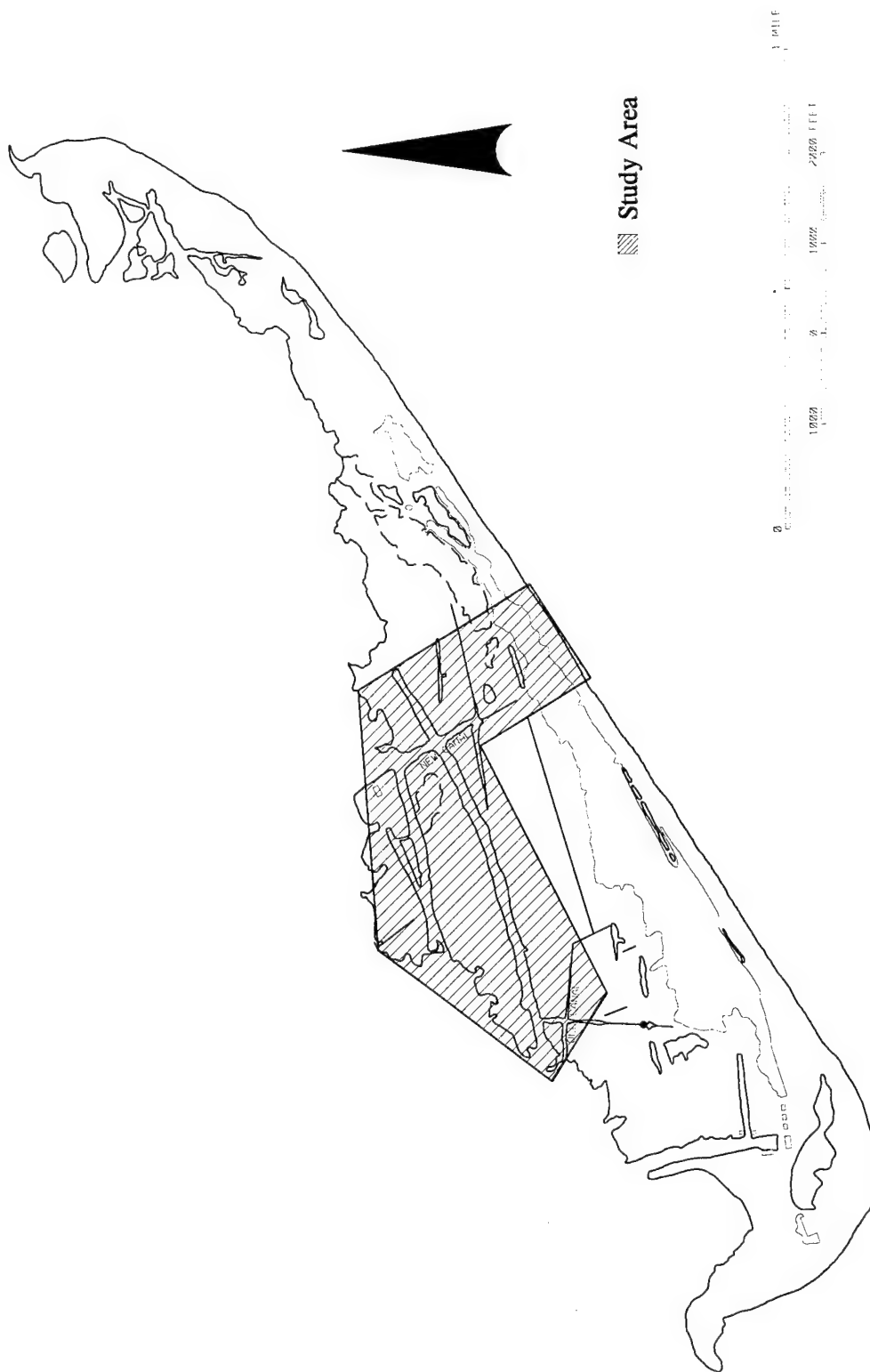


Figure 2. Portions of the project area initially identified as having archeological potential.

Phase 2 entailed a program of systematic shovel testing, augering, probing, magnetometer survey, metal detector survey, canal wire drag, and site mapping. Survey focused on high-probability areas identified during Phase 1. 16JE127, 16JE128, and 16JE129 were all investigated. Site boundaries were delineated, *in situ* cultural deposits were identified, and areas of disturbance were delineated. Phase 3 included data analyses and report preparation.

Report Organization

Chapter 2 provides a geomorphic and environmental overview of the island and identifies the natural processes that have impacted the island and the sites. Chapters 3 and 4 are discussions of the prehistory and history of the project area, respectively. Chapter 5 summarizes the previous archeological investigations on Grand Terre. Chapter 6 provides a discussion of field methodology as well as the results of investigations. A summary of research, conclusions, and recommendations is presented in Chapter 7.

CHAPTER 2 NATURAL SETTING

Introduction

Grand Terre is a barrier island in the Louisiana coastal region known as the Barataria Basin or Barataria Estuarine Complex (Rooney 1984:v). The basin is flanked on the west by the abandoned lobe of the Lafourche delta, with Bayou Lafourche and Belle Pass being the major distributaries. On the east it is flanked by the abandoned lobe of the modern Mississippi River delta, with Red Pass (modern Mississippi River trunk channel) as the major distributary (Rooney 1984:v). The north limit is in the Lac des Allemands swamps, in the vicinity of Donaldsonville, and the south limit is Grand Terre Island (Adams et al. 1976:3). Barataria Basin encompasses approximately 400,000 ha and is about 129 km long. It is an interdistributary basin consisting of fresh, brackish, intermediate, and saline marshes; swamp forest; beaches; natural levees; and chenier ridges.

Grand Terre Island is 75 percent marsh and 25 percent dune. Environmental and cultural actions have impacted natural features. Hummocks of low elevation, ponds, beach overwash and cultural resources such as archeological sites, pipeline canals, historic transportation canals impact the area so that major changes occur in vegetation, groundwater level, and erosion at very short distances.

Geomorphology

The coastal area of Louisiana has had an active and complex history of delta formation and erosion (Frazier 1967; Frazier 1974; Penland et al. 1990). Six major delta complexes were deposited by the Mississippi River over the last 8000 years. Four of these are now abandoned and in stages of deterioration (Penland and Boyd 1985b:55). Two of the deltas are actively prograding. The region of shoreline where Grand Terre is located was transformed into a series of erosional headlands about 400 to 600 years ago. With the erosion of Cheniere Ronquille, which was a fan-shaped beach ridge plain, and of the Plaquemine delta lobe distributaries, sediments were transported westward and accumulated to form Grand Terre (Penland and Boyd 1985a:29). Coastal currents diverge in the vicinity of Belle Pass. Thus, Grand Isle has been built from west to east, while Grand Terre has formed from east to west (Gagliano et al. 1979:2-20, 2-22).

Since its formation, Grand Terre has experienced the effects of storms, subsidence, erosion, barrier segmentation, and accretion. These forces have conflicted, causing the building up and wearing away of the barrier island, but all have had serious impacts on archeological sites.

Storms. Coastal storms can cause extensive and rapid damage to landforms and archeological sites.

The low pressure center associated with tropical storms and hurricanes causes higher than normal water levels along the coast by "sucking in" water from surrounding high-pressure areas. The higher water levels, together with winds that are sometimes greater than 175 miles per hour, result in a "storm surge," a huge mass of water that can have disastrous effects when it hits the shore. Storm frequencies vary throughout the Southeast, but most areas average at least one small storm per year. Larger, more destructive storms are less predictable, but over 111 hurricanes hit the southern coast within a 57 year period between 1900 and 1957 [Garrett 1983:39].

Hurricanes and major storms have played a significant role in the erosion of the barrier islands and shorelines (Van Beek and Meyer-Arendt 1982:8). In 1831, a hurricane inundated the island with six meters of water. It destroyed buildings and crops on Forstall Plantation (Williams et al. 1992:14). Mr. Mark Schexnayder (personal communication 1995) states that the sugar house at 16JE129 had been more intact prior to Hurricane Andrew (1992), and that the storm spread brick rubble along the beach.

Although not as intensive as hurricanes, seasonal storms also rework the island. The prevailing southeasterly winds and associated wave action generally cause sands to migrate westward, building up parts of the island. At the same time, the Gulf shore undergoes localized cycles of erosion and accretion, such as were observed at 16JE129 (below). The erosional processes outweigh any progradation that occurs. Winds, rain, and wave action caused by winds from the north erode the Barataria Bay shoreline.

Subsidence. The consolidation of underlying sediments from the weight of features such as dune beaches is one factor which has contributed to subsidence on Grand Terre. The downward movement of land when combined with the rise in sea level can also cause accelerated erosion (Adams et al. 1976:8-9; Garrett 1983:37). The result is that archeological sites sink below the marsh level. The rise in sea level has probably affected the subsidence rate only minimally on Grand Terre, since the sea level became relatively stable after 4000 B.P. At the same time, archeological sites have "sunk" as a result of the combination of subsidence and accretion.

Subsidence was particularly visible at 16JE129, where brick fragments were found to a depth of 160 cm below ground surface. The mechanics of subsidence here were not completely determined, but sand overwash appeared to be a contributing factor. Along the Gulf side of the island, a sand "ridge" was observed. Periods of greater southerly winds and wave action during fieldwork resulted in increased sand overwash along the ridge. In addition, some of the accumulated sand migrates inland from the ridge as a result of southerly winds and rain. Thus, even in areas away from the ridge, artifacts were found to a depth of 80 cm below surface. The weight of the sand, along with that of decomposing organic matter, has caused the original ground surface to subside.

Accretion. There is continuous accumulation of sand and organic materials from marsh grasses and other vegetation on Grand Terre. As noted above, a sand "ridge" parallels the Gulf side of the island. Sand is generally deposited on the land by overwash. The quantities of sand that are deposited depend on the intensity of winds, storms, surf, and normal tide cycles. As noted above, some of the accumulated sand is transported inland, by southerly winds and rain, from the ridge along the shoreline. The accumulation of sand is perhaps primarily seasonal, with greater deposition also occurring during hurricanes.

Accretion that occurred during a period of less than one month was observed at 16JE129. In April, the bricks of the sugar house and wood features off the shore were completely exposed. During a brief visit to the island in early May, the bricks and wood features were almost entirely covered with sand.

Erosion. Garrett (1983:37) states that the major cause of coastal erosion has been the post-glacial rise in sea level that began approximately 17,000 years ago. Although the rise slowed considerably about 4,000 years ago and thus has had minimal impacts on Grand Terre, the sea level rose 10-20 cm during the last century. As global warming increases, the rate of sea level rise may increase substantially, causing increased erosion, inundation of low-lying lands, and storm damage.

Surface currents form in response to prevailing wind patterns. The prevailing winds and wave action on Grand Terre are southeasterly. Shoreline orientation is also a major factor in the formation of surface currents. These currents, in combination with along shore currents in the breaker zone, can cause directional movement of materials along the shoreline. Dredging or channelization can alter currents, "...increasing or shifting the focus of their erosive force, and accelerating the damage to an archeological site" (Garrett 1983:39). On Grand Terre, the shoreline retreat rates vary in different parts of the island:

The western end of Grand Terre is eroding due to tidal-exchange processes. Sediment drift is bi-directional, and it has been postulated that groin and jetty construction on Grand Isle has interrupted the longshore movement of sediments that is dominantly eastward during fall and winter... The width of the beach in the vicinity of Fort Livingston, however, indicates accretion. Tidal exchange appears to be a more dominant factor than longshore sediment drift [Van Beek and Meyer-Arendt 1982:20].

Erosion was visible at both 16JE128 and 16JE129, although the process and its impacts differed on the Barataria Bay and the Gulf of Mexico shorelines. Observation of *in situ* artifacts at 16JE128 demonstrates that they are eroding from a marsh grass root mat located at least 10 cm under the current ground surface. The erosion rate here is dependent upon the intensity of the wave action, on prevailing winds, and on the conditions of low or high tide in Barataria Bay. The number of artifacts found redeposited on the shoreline is greater following storms. Erosion at 16JE128 has been sufficient to remove approximately 13.7 m of land since 1989. It should be noted that erosion has increased on the north shore of Grand Terre since the recent disappearance of shell "islands" north of Grand Terre. These islands buffered the northerly winds and wave action (Mark Schexnayder, personal communication 1995).

Auger testing demonstrated that cultural materials associated with 16JE129 are buried north of the sugar house foundations. The shore is eroding northward, despite periodic accumulations of sand (above). During field investigations, artifacts were constantly being redeposited on the brick-strewn shoreline. These artifacts were being eroded from inundated, presumably *in situ* deposits in the Gulf and moved to the shore through wave action. The waves, intensified by southern winds, redeposited artifacts as far away as 0.5 km east of the sugar house foundations.

The barrier islands are losing total land areas at a rate of 65 ha per year (Mendelssohn 1985:203). It is expected that, if the current pattern of land loss cannot be reversed, Grand Terre will disappear within the next century.

Barrier Segmentation. Pass Abel and Quatre Bayoux Pass are tidal inlets that have breached the original island since 1893. The inlets have rapidly increased in cross-sectional area, and they have developed extensive ebb-tidal deltas due to land loss. Grand Terre now consists of three separate islands (Ritchie et al. 1990). The current project was conducted on the westernmost island.

Soils

The soil on Grand Terre is predominantly Scatlake muck (Matthews 1983:Sheet 40). Scatlake is a very poorly drained soil found in saline marshes that are flooded or ponded most of the time. During storms, the soil is covered with 0.6 to 0.9 m of water. During nonflood periods, the water table is from 30 cm above the soil surface to 15.2 cm below the surface. Scatlake muck is formed in clayey alluvium, but it contains some marine sediment (Matthews 1983:58). Scatlake muck is not suited to crops, trees, or pasture because of wetness, flooding,

salinity, low strength, and poor accessibility (Matthews 1983:23). The soil varies from neutral to mildly alkaline.

A zone of Felicity fine sandy loam, occasionally flooded, is on the south shoreline of Grand Terre (Matthews 1983:Sheet 40). Felicity is a somewhat poorly drained, saline sandy soil found on ridges along the Gulf of Mexico. It is subject to flooding by saltwater during high storm tides. Felicity soil formed in sandy material on former beach ridges deposited by the wave action of the sea. The sand has been transported to other parts of the landform by normal beach overwash, hurricanes, and other processes. Felicity soil is saline and has low fertility. It is not suited to crops and is poorly suited to pasture mainly because of flooding, wetness, and salinity. The soil varies from neutral to mildly alkaline (Matthews 1983:50).

Mr. Lyfon Morris (personal communication 1995), Research Soil Scientist with the Soil Conservation Service, states that a century ago, prior to subsidence, the soil on Grand Terre Island was probably Sharkey silty clay loam. The Sharkey soil series consists of poorly drained, very slowly permeable, firm mineral soils (Matthews 1983:53). The surface layer is wet for long periods in winter and spring. From December through April, under normal conditions, the high water table fluctuates between the surface and 0.6 m below the surface. The content of organic matter is low to moderate, but the natural fertility is high. The soil varies from strongly acid to mildly alkaline.

Sharkey silty clay loam is well suited to use as pasture. It is moderately well suited to cultivated crops:

Vegetables are the main crop, but corn, grain sorghum, rice, sugarcane, and soybeans are also suited. The low layer of this soil is slightly sticky when wet and hard when dry; it becomes somewhat cloddy if worked when too wet or too dry. Wetness delays tillage operations in most years. A drainage system is needed for most crops. Surface field ditches and land grading or smoothing help remove excess surface water. Returning crop residue to the soil helps maintain the content of organic matter, improve tilth, and reduce soil losses from erosion [Matthews 1983:19].

Climate

All of Louisiana is located within an area of humid meso-thermal climate of the humid subtropical type generally characterizing all of the Southeastern United States (Trewartha 1970:12-13). The average winter temperature is 54 degrees Fahrenheit, with an average daily minimum of 44 degrees. The average summer temperature is 81 degrees, with an average daily maximum of 90 degrees. The coastal area is frequently cooled by sea breezes. There are a few killing frosts in the north part of the basin, but the southeastern part is nearly winterless. Although the growing season may exceed 320 days in the Grand Terre area, conditions are generally unsuitable for the cultivation of crops (Kniffen 1968:21). The total annual precipitation is 1.5 m, with most of the rain falling in April through September (Matthews 1983:2).

Major storms, including hurricanes, occur at the rate of approximately one per decade (Ritchie et al. 1990:10). As noted above, archival documents describe the destructive force of hurricanes on Grand Terre and Grand Isle. Flooding and strong winds have killed people, have resulted in major property damage, and have accelerated erosion of the island. These natural occurrences, along with long term subsidence, have destroyed or extensively damaged archeological sites.

Floral Communities

Grand Terre, located on the southern boundary of Barataria Basin, has experienced major changes in flora and fauna as the land has subsided. The diversity of plant species has decreased as water salinity increased (Chabreck 1988:26). Mendelssohn (1985:204-205) observes that the dominant dune vegetation in saline marshes consists of marsh hay cordgrass (*Spartina patens*), bitter panicum (*Panicum amarum*), seashore dropseed (*Sporobolus virginicus*), and beach morning glory (*Ipomea stolinifera*). Of secondary importance are beach tea (*Croton punctatus*), seashore paspalum (*Paspalum vaginatum*), dune elder (*Iva imbricata*), seaside goldenrod (*Solidago sempervirens*), sea oats (*Uniola paniculata*), and pennywort (*Hydrocotyle bonariensis*). Matthews (1983:22) adds needlegrass rush (*Juncus roemerianus*), seashore saltgrass (*Distichlis spicata*), smooth cordgrass (*Spartina alterniflora*), bushy sea-oxeye (*Borrchia frutescens*), saltwort (*Batis maritima*), and Virginia samphire (*Salicornia virginica*) as natural vegetation on Scatlake muck. Felicity soils exhibit black mangrove (*Avicennia nitida*), bigleaf sumpweed (*Iva frutescens*), seashore saltgrass (*Distichlis spicata*), saltwort (*Batis maritima*), and smooth cordgrass (*Spartina alterniflora*). *Spartina alterniflora* is more resistant to erosion than most species of the brackish marshes because of its extensive root system (Adams et al. 1976:1). Less common plants on this soil are beach morning glory (*Ipomea stolinifera*), bushy sea-oxeye (*Borrchia frutescens*), marsh hay cordgrass (*Spartina patens*), and needlegrass rush (*Juncus roemerianus*). Some areas lack vegetation.

The most detailed description of the flora on Grand Terre is presented by Ritchie et al. (1990), and is based on four transects across the island. The west end of the island exhibits beach tea (*Croton punctatus*), yellow rattlebox (*Sesbania drummondii*), and marsh hay cordgrass or wiregrass (*Spartina patens*), three-cornered grass (*Scirpus olneyi*), seashore dropseed (*Sporobolus virginicus*), and dog tooth grass (*Panicum repens*). To the east, the seaward edge of the dune terrace is covered with bermuda grass (*Cynodon dactylon*), along with the species listed above. Bermuda grass also surrounds the research station on the island. It is a recent introduction from the Old World (Bahr and Hebrand 1976:62).

Animal Species

Very few species of land animals are observed. This is probably a result of the relatively inhospitable conditions. As noted, most of the land is constantly submerged under 20 cm of saltwater. Fishes and other aquatic species predominate, along with other animals that subsist on oysters, crabs, and fish.

Fishes and Crustaceans. Since Grand Terre is an island lying between Barataria Bay and the Gulf of Mexico, many species of salt water fish species are present (Bahr and Hebrand 1976; Department of Conservation 1933:302-306). They include sturgeons (*Acipenser oxyrhynchus*), gars (*Lepisosteidae* sp.), tarpons (*Tarpon atlanticus*), gizzard shads (*Dorosoma cepedianum*), red fish (*Sciaenops ocellata*) and cat fishes (*Ariidae* sp.). Crustaceans in the estuary complex include shrimp and blue crab. Oysters are visible in the canals.

Along Barataria Bay by 16JE127 and 16JE128 are linear areas of *Rangia* shell eroding out of the shore. *Rangia* was also observed in subsurface levels under brick in a shovel test on a hummock at 16JE128. Since these deposits are located approximately 30 m inland from the current shoreline, it is unknown if the species was naturally present during island formation, or whether shell was brought historically for elevating occupation areas.

Concentrations of the shell were not observed along the canals on the interior of the island or along the shoreline beyond the sites. Augering and probing along the canal did not reveal concentrations of *Rangia*, although above-mentioned shovel test revealed a lens approximately 15 cm thick. It is possible that the co-occurrence of *Rangia* and sites is fortui-

tous. The sites are located adjacent to the mouths of the two major canals entering the island from Barataria Bay. The highest naturally occurring concentrations of *Rangia* are located adjacent to tributaries and to sources of either fresh or salt water (Tarver and Dugas 1973:33). *Rangia* are subject to salinity shock, which stimulates spawning. The density of *Rangia* decreases as the salinity increases, but at the optimum salinity, the populations are dense, and all size variations are present.

Although the occurrence of the shell may be natural, there are strong arguments for suggesting that loads of *Rangia* were brought to the island by its inhabitants. Sharkey silty clay loam, historically covering most of Grand Terre, becomes sticky and difficult to traverse when wet. With the abundance of *Rangia* in aboriginal middens along lakes and distributaries, shell could have easily been transported to Grand Terre. A layer of shell in the areas of warehouses or docking facilities at the mouths of the canals would have provided a secure surface for moving goods. *Rangia* was transported to Grand Terre for the construction of the walls at Fort Livingston and, in more recent years, was used to seal pipeline canals.

Reptiles. Reptiles are scarce in the saline marsh (Bahr and Hebrard 1976:48). Chabreck (1988:46) states that reptiles found in the Louisiana saline marsh are the diamondback terrapin (*Malaclemys terrapin*), Mobile cooter, Gulf salt marsh snake (*Natrix fasciata clarki*), and American alligator (*Alligator mississippiensis*). A few non-poisonous snakes and a diamondback terrapin were the only reptiles observed on Grand Terre during fieldwork.

Mammals. The saline marsh provides a habitat for moderate numbers of muskrat (*Fiber zibeticus*), mink (*Mustela vison*), otter (*Lutra canadensis*), and raccoon (*Procyon lotor*) (Matthews 1983:22, 33). The otter lives almost exclusively on fish, and is seldom found far from rivers, streams, or lakes. The mink eats fish, snakes, frogs, insects, crustaceans, and shellfish, as well as birds' eggs (Department of Conservation 1931:108). Muskrats are predominantly vegetable feeders. They eat the roots of a variety of plants growing around or in water, particularly the *Scirpus* species, or three-cornered grasses. Raccoons feed on practically anything, including fiddler crabs, snails, rail eggs, and some plant roots. Skeletal evidence of nutria (*Myocastor coypu*) was observed on the island. The nutria is a recent introduction that was not present during the historic period. Matthews (1983:33) states that the population density of nutria, ducks, American alligator, and swamp rabbit is low in the saline marsh. As a result of the relatively sparse vegetation and saline conditions present on Grand Terre Island, the species of animals present are small and limited. They have had value as for fur trapping, but Grand Terre has been of minor importance as a source area. The furs obtained from animals trapped in salt marshes tend to be of poorer quality than those found in less saline marsh areas. A few cattle graze on the island (Ritchie et al. 1990:10). Goats were also observed during fieldwork.

Birds. Barataria Basin is generally rich in the species of birds that it attracts, since it sits at the end of the Mississippi Flyway (Rooney 1984:v). This is the largest waterfowl migratory route in North America. In the saline marshes of Grand Terre, wading birds and fishing birds are preeminent (Bahr and Hebrard 1976:48). These include reddish egret (*Dichromanassa rufescens*), white pelicans (*Pelecanus erythrorhynchos*), brown pelicans (*Pelecanus occidentalis*), skimmers (*Rynchops niger*), gulls (*Larus* sp.), terns, and diving ducks (scaup and mergansers). Many birds stop briefly in the marshes en route to traditional wintering areas to the south or breeding areas to the north (Chabreck 1988:45).

CHAPTER 3

ABORIGINAL OCCUPATIONS IN SOUTHEASTERN LOUISIANA

As noted in the previous chapter, the formation of Grand Terre occurred relatively recently, between 400 and 600 years ago. Consequently, the only prehistoric culture period likely to be represented on the island is Mississippian. It should be noted that aboriginal material has never been collected from Grand Terre.

The Mississippian Period

The beginning of the Mississippian period is marked by the appearance of emergent Mississippian culture in the northern part of the Lower Mississippi Valley and throughout much of the interior Southeast. Mississippian culture characteristics, such as shell tempering and the use of maize agriculture, did not penetrate into much of the central Lower Valley until after ca. A.D. 1200. Plaquemine culture is the term used to denote the indigenous late prehistoric populations of most of the Lower Mississippi Valley and adjacent coastal regions. Archaeological evidence suggests that Plaquemine culture emerged from a Coles Creek base and was later influenced by Mississippian intrusions from farther up the Mississippi River Valley. Multi-mound construction and artifact assemblages are evidence that link the two. Absence of European trade goods indicates that the Plaquemine culture reached its zenith prior to European contact (Neuman 1984:258-259).

The late prehistoric culture history and chronology of the eastern portion of the Louisiana coastal zone is not well understood at present (Jeter and Williams 1989:191). The data indicate that local Plaquemine populations in the region developed out of the Transitional Coles Creek/Plaquemine beginning at roughly A.D. 1200 (Jeter and Williams 1989:191-195; Weinstein 1987). At roughly the same time, however, Mississippian ceramics (and possibly peoples), which are identified with the Pensacola variant of Mississippian culture, enter into the area from the east, presumably via the Gulf Coast. Sites in the eastern coastal zone with shell tempered pottery in large quantities are identified with the Bayou Petre phase. Late prehistoric sites in the area without shell tempered pottery, and which show evidence of more Lower Valley ceramic characteristics, are identified with the so-called Delta-Natchezan phase. Although these Mississippian ceramics tend to be found primarily in the easternmost part of the region, Mississippian Bayou Petre phase pottery is not wholly confined to this region (McIntire 1958). To further complicate the picture, there is increasing evidence that the late prehistoric populations in the Barataria Basin integrated some of the Mississippian designs and styles into the local ceramic repertoire (Davis and Giardino 1981).

The Plaquemine occupation of the Barataria Basin and adjacent parts of the coastal zone is designated the Barataria phase. This phase was defined by Holley and DeMarcay based on excavations conducted at the Fleming site (16JE36) (Holley and DeMarcay 1977; Manuel 1984). Fleming consists of at least one earth and shell mound, and a shell midden (Holley and DeMarcay 1977:4; Weinstein 1987:96). The Fleming site is one of three apparently contemporary occupations at the junction of Bayou Barataria and Bayou Villars (16JE68). The Isle Bonne (16JE60) and Bayou Villars sites also consisted of earth and shell middens and mounds (Gagliano et al. 1975:24, 58, 1979; Holley and DeMarcay 1977; Weinstein 1987:96). As noted by Weinstein (1987:96), "this large mound complex forms the hub of the Barataria phase."

The Barataria phase is differentiated from the contemporary Medora phase of the Mississippi Valley by the absence of Plaquemine Brushed pottery and by the extensive use of so-called Southern Cult motifs in association with typically Lower Valley pottery such as Anna Incised and L'Eau Noire Incised (Holley and DeMarcay 1977; Weinstein 1987:96). The Barataria phase ceramics, however, are otherwise Plaquemine in composition. Major types

and varieties associated with this phase include L'Eau Noire Incised, *vars.* *L'Eau Noire* and *Bayou Bourbe*, Carter Engraved, Maddox Engraved, and Mazique Incised, *var.* *Manchac* (Holley and DeMarcay 1977:14-18).

With the decline of Moundville and its influences across the Gulf Coast in the later part of the fifteenth century, the deltaic part of the coastal zone saw once again a renewed emphasis on indigenous styles in ceramics. The so-called Delta Natchezan phase represents the final late prehistoric phase in the region. Ceramics of this phase show a strong continuity from the Barataria/Bayou Petre phase occupations in the region, with the addition of pan-Lower Valley varieties such as Fatherland Incised, *vars.* *Fatherland* and *Bayou Goula*. Shell tempering continues as an important, but not unique, characteristic in the ceramics from the region (Giardino 1985).

The largest excavated late prehistoric site in the deltaic portion of the coastal zone is the Sims site (16SC2) (Davis 1981; Davis and Giardino 1981; Giardino 1985). Excavations in areas 1 and 3 at Sims revealed Mississippi period deposits attributable to the Bayou Petre and Delta Natchezan phases. Excavations in area 3 at Sims revealed a late Mississippi period component thought to be related to the terminal occupation at the Bayou Goula site (16IV11) and possibly dating to the protohistoric or early historic period (Giardino 1985).

The Bowie site (16LF17) also contained a minor Bayou Petre or Delta Natchezan phase occupation (Jackson 1977). During this late prehistoric period, archeological sites are found across much of the marsh and levee lands of the eastern coastal zone. Collections from the Buras Mounds (16PL13) and from the Bayou Ronquille site (16PL7) demonstrate that there were important mound occupations located near the modern day coast and associated with recent distributary channel courses (see Kniffen 1936; Weinstein 1987).

The Bayou Des Familles channel appears to witness an increase in occupation frequency during the late prehistoric and into the historic periods (Beavers 1982; Franks and Yakubik 1990; Fuller 1991; Swanson 1991; Yakubik 1989). Mississippi period sherds at a number of small shell middens along the bayou suggest that either larger populations were exploiting the region, or that they were visiting the area more frequently. None of the Mississippi period sites are large, nor do they show evidence of the building of typically Mississippian site plans or features (mounds, mound-plaza arrangements). The radiocarbon dates from the Bayou Des Familles site (16JE218), in conjunction with the ceramic assemblage, however, demonstrates that both shell tempered and clay/Addis pottery were being used at the same time.

In contrast with the Petit Anse region, the eastern coastal zone does not witness very dramatic changes in settlement during the post-Coles Creek era. Several important trends become evident, however. First, we see an expansion of settlement into more recently formed marsh areas and along peripheral distributary channels adjacent to the essentially modern course of the Mississippi River. Sites such as Buras Mounds and Bayou Ronquille are good examples of this trend (Kniffen 1936; Weinstein 1987). There is also an evident pattern of nascent settlement coalescence focusing on relatively centralized, frequently mounded, communities. In the eastern coastal zone, we see the formation of a small number of large mound groups which appear to be the central focus of occupation in the region. Other than these mound sites, large late prehistoric sites are not especially evident. Bayou Petre and Delta Natchezan non-mound sites are small, and generally are associated with well-elevated stretches of levees. The typical Coles Creek marsh adaptation appears to have been abandoned for one presumably more focused on the cultivation of domestic crops in well-drained areas.

The subsistence and sociopolitical organization of the late prehistoric period are not well documented. A small amount of corn was recovered from uncertain contexts at the

Fleming site. Analysis of the fauna from Sims indicates that the later prehistoric inhabitants of the site were exploiting a narrower range of animals, and were placing less emphasis on marsh species, notably alligator and muskrat. At Pump Canal (16SC27), however, the post-Coles Creek occupants appear to have been carrying on with a marsh oriented subsistence pattern, focusing on muskrat, raccoon, deer (to a lesser extent), fish, and amphibians (Misner and Reitz 1994). This late prehistoric occupation (or occupations) appears to have been relatively transient and may represent the shift from village type occupations to more temporary, possibly seasonally occupied, camps. Changes in faunal exploitation and settlement type at Pump Canal appear to correlate with changes in local environments (Jones et al. 1994). Ethnohistorical data from the region suggest that the Chitimacha Indians practiced a mixed fisher-farmer-collector subsistence strategy. Maize and other cultigens were planted on elevated plots of land, frequently along bayous, with populations periodically (perhaps seasonally?) ranging out to marshes and lakes to gather shellfish and to fish. In the early historic period, the Chitimacha evidently moved in mixed-sex family groups, and they may have spent much of the summer away from their garden plots.

There is little doubt that the late prehistoric Indians of the eastern coastal zone were living in stratified chiefdom level societies at the time of early European contact. Weinstein and Kelley (1992) suggest a hierarchically organized settlement pattern for the late prehistoric communities in the Terrebonne marsh area, involving mound communities, lesser villages, and seasonal resource collecting stations or camps. Along Bayou Lafourche, Altschul (1978) identified two temporally distinct patterns, corresponding to what are identified as Plaquemine and Mississippian cultural occupations. The earlier, Plaquemine pattern evidently involved a seasonal pattern of movement focusing on a centralized fall/winter community located on interior forested levees, with spring/summer occupations consisting of dispersed habitations spread across most major landforms, but especially emphasizing the exploitation of marsh and coastal resources (Altschul 1978:184-186). Evidence for status differentiation in and among these communities is minimal (Altschul 1978:186). The second pattern described by Altschul is associated with the "Mississippian" occupation of the region (1978:186), with large, sedentary mound communities occupying elevated levees. Altschul hypothesizes that "a sizable proportion of the villagers lived in dispersed homesteads" (1978:186). He further infers that, "While there is no definitive evidence, the location and complexity of these sites indicates that plant domesticates were heavily utilized" (Altschul 1978:186).

Historic Contact Period

There are no known historic references indicating Native American occupation on Grand Terre. However, the earliest French documents indicate that villages of the Chouacha, Ouacha, and Chitimacha Indian tribes skirted the Barataria Basin, with settlements located on the natural levees of the Mississippi River and Bayou Lafourche. The first French name of Chênière Caminada was "Isle of the Chitimachas," suggesting the location of a Chitimacha settlement not far from Grand Terre (Evans et al. 1979:14). Other tribes, namely the Muguasha and the Bayougoula, lived nearby along the Mississippi River.

The Chouacha and Ouacha were likely related tribes, in the Chitimacha division of the Tunican linguistic stock (Swanton 1911). The Chitimacha, Chouacha, and Ouacha evidently shared a similar way of life that combined that of farmer and hunter-fisher-collector, allowing them to maximize exploitation of resources (Holmes 1986:30-31). It is conceivable that individuals from these Barataria groups occasionally traveled to Grand Terre in order to hunt or fish, but no documentary or archaeological evidence of this has been found. At the time of initial contacts with the French, the Chouacha were mainly settled along the course of the Mississippi, while the Ouacha dwelt in the vicinity of Bayou Lafourche. The Chitimacha settlements were concentrated on the western bank of Bayou Lafourche and on Bayou Teche. However, the village locations reported by the French for these three tribes changed frequently

during the early decades of the eighteenth century. The Ouacha, and other tribes in the region, displayed a high degree of mobility and were characterized by Iberville as wandering tribes (Giardino 1984:229). The Chouacha were said by the French "to have the same character as the Ouacha" (Kniffen et al. 1987:55).

The Chouacha, Ouacha, and Chitimacha probably suffered adverse consequences from the arrival of Europeans in the area from an early date. Communicable diseases likely ravaged the Native American population soon after the Europeans' arrival in the late-seventeenth century, and the endemic warfare between tribes, which some feel was characteristic of the late prehistoric period, may have continued and further reduced the Native American population (Holmes 1986:30-31, 35).

The Ouacha may have been living on the Island of Barataria when the French arrived in the area (Holmes 1986:31). Early French explorers, cartographers, and settlers referred to Lake Salvador as *Lac des Ouachas* and Bayou Barataria as *Bayou des Ouachas* or *Rivière des Ouachas*, in attribution to the inhabitants near these bodies of water. The Ouacha were moved by Bienville in 1715 to a location two leagues above New Orleans, on the west bank of the Mississippi River. The Ouacha had about 50 warriors in 1715, a decline from 200 only decades earlier (Swanton 1952:211-212). The Chouacha allied themselves with the French in the early part of the war against the Chitimacha and contributed about 40 warriors to a French raid against the Chitimacha in 1707 (Kniffen et al. 1987:55).

There is little documentation of how Native Americans utilized the Barataria Basin in historic times. Pénicaut referred to the Chitimacha, Chouacha, and Ouacha as "highly industrious, and all were quite helpful in furnishing food to the French, to the troops as well as to the people on the concessions" (McWilliams 1953:220). Pénicaut recorded several instances of Chitimacha groups traveling from villages to fish in nearby lakes or bayous (McWilliams 1953:71-72, 101-102). In both of the recorded examples given by Pénicaut, these groups consisted of men, women, and children. It is not clear from these accounts, however, how long these trips would have lasted. In one instance the fishing party was set on by the Europeans, and some "escaped to their village and gave the alarm" (McWilliams 1953:101-102), suggesting that this aspect of the subsistence round did not involve the entire village. The Chitimacha probably exploited the basin for hunting and fishing, but it is evident that Lake Salvador was a principal area for the Ouacha and the Chouacha villages (Swanson 1991).

CHAPTER 4 HISTORIC OVERVIEW OF GRAND TERRE

European Exploration And The Colonial Period To 1803

The island of Grand Terre is depicted with some measure of accuracy on European maps beginning about 1770, but was certainly known and explored prior to that date. Several eighteenth-century maps (e.g., *Carte de Louisiane* by Le St. D'Anville 1732) designate Barataria Bay as *Lac des Ouachas* and Chênrière Caminada as *Isle des Chitimachas*, suggesting that Native Americans may have visited Grand Terre for hunting and fishing during the early historic period.

Precisely when Europeans first made landfall on Grand Terre is not documented. Several explorers and sea captains sailed the Gulf in the sixteenth, seventeenth and early-eighteenth centuries without describing Grand Terre in their writings. The Spanish were not as interested in exploiting the coast of the future Louisiana as they were other areas, such as Mexico (Evans et al. 1979:14). La Salle's expedition of 1685-1686 skirted the Louisiana coast while looking for the mouth of the Mississippi, but fearful of grounding, did not approach Grand Pass and Grand Terre. Jean Béranger, exploring the Gulf in 1720, also bypassed the mouth of Barataria Bay (Weddle 1991:18-20, 216). According to an early-eighteenth-century French map, the route from New Orleans along Bayou Barataria, through Barataria Bay, and out Grand Pass (or Barataria Pass) to the Gulf was discovered in August 1722 (Evans et al. 1979:14).

Among the earliest French maps on which an island at the mouth of Barataria Bay can be distinguished is the *Carte de La Louisiane* by Le St. D'Anville, printed in 1732. On this map, the area of the Gulf of Mexico adjacent to Grand Terre is named *Ensenada de Palo*, meaning the inlet of the stick, club, or mast. This may refer to driftwood accumulated on the beach in this vicinity (Evans et al. 1979:16). The *Carte* notes that this is the name of the inlet "on Spanish charts" and that the cove is also known as "Woods Bay." The island itself is not named on the *Carte*, and on other eighteenth-century maps, the coast is referred to as *Ensenada de Palo*, Woods Bay, Bay of Logs, or *Anse au Bois* (Evans et al. 1979:16).

Captain Bond, an Englishman who explored the Gulf coast in 1698, may have sailed into Barataria Bay. However, he did not describe Grand Terre (Coxe 1741). Another Englishman, George Gauld (1771), published a *Plan of the Coast of West Florida and Louisiana Including the River Mississippi* in 1771. This was the first relatively accurate survey of the Louisiana Gulf coast, including extensive soundings. It was considerably more accurate than the map published by Barthélemy Lafon in 1805, the *Carte Générale du Territoire d'Orleans* (Lafon 1805). The Spanish, in control of Louisiana after 1763, were jealous of the political and mercantile security of their Gulf dominions and sought to restrict both access to and information about the Gulf Coast. However, ca. 1785, Spanish pilot José de Evia conducted a reconnaissance of the Louisiana Coast, and produced the first extensive description of Grand Terre and its neighbor, Grand Isle:

Leaving by Southwest Pass, in order to go to Barataria, or Gran Tierra, I bore toward the west, a quarter northwest, in a depth of four fathoms. Having sailed twelve leagues, I began listing toward the eastern part of the bar. It runs east-southeast west-northwest for a distance of three miles. Its depth is fifteen feet at the entrance and continues to increase toward the part within the Punta del Este [the eastern side of the Pass, where Fort Livingston is located], where it is three or four fathoms. It ought to be considered, then, that this is [the depth] of the inner part. This place has communication with the Rio de la Nueva Orleans by two bayous, through which, when that river is high, the outflow is great.

The result is a strong current at low tide, and although the place is sheltered, good anchors are necessary in order to hold, because the bottom is of silt.

Any vessel can obtain the necessary aid in this port. The signs by which it may be identified are three separated clumps of trees on this same Punta del Este, upon which there is one inhabitant, a flagstaff, and a cannon for signaling the vessels that put into this harbor. They aid those which find it necessary to enter, which fact they signify by means of one or more cannon shots until they receive a response from land. Then the land which continues toward the south-southwest will be seen under the lee. It will not be deeper than four fathoms because the bottom to the north in the small bay which the peninsula forms is deceptive, having many oyster banks, and the land is not visible. This whole coast is barren of vegetation [*pajonales*] with no other timber than that mentioned. Because of this it is easily reconnoitered. Beyond the bar it is possible to anchor in 4, 6, and 6 [*sic*, 8?] fathoms, which will be in sight of land. This may be done in good weather, but in bad weather it is better to stand by the sails, with the precaution that the water at this place flows strongly to the west, due to the outflow of the Mississippi. The tides on this coast rise regularly to four feet...

...the bar of Barataria is 13 leagues to the west of the mouth of the Mississippi... The land [Grand Terre] is very low and liable to overflow, which permits no building other than two huts, which are on the eastern part of the entrance [Grand Pass]. There is a harbor pilot, who has a flagstaff, and a cannon for signaling vessels which, falling to the leeward of the Mississippi because of its strong current or some other accident, frequently list into these waters, and in order to bring them inside, if necessary, where they can be aided with whatever they need. This coast is clear and of a good depth, but in winter the *sueres* [south winds] and south-easters, which are hard and continuous, are terrible, and in August and September there are hurricanes...[quoted in Hackett 1931:355-356].

It is notable that by 1785, Spanish commerce around the mouths of the Mississippi and along the Gulf Coast was sufficiently developed to make a pilot station at Grand Terre worthwhile. Elsewhere, de Evia discusses the vicinity of Grand Isle (*Isla Larga*), and mentions the large amounts of driftwood along this coast, caused by the outflow of the Mississippi, and the presence of hunting and fishing camps (Evans et al. 1979:18-19). Presumably, de Evia was adapting the French name for the island, Grande Terre. Until the twentieth century, the correct French spelling of "Grande" was consistently used on maps and documents when referring to Grand Terre.

With huge amounts of excellent alluvial land available in the Louisiana colony, the Gulf Coast of Barataria remained sparsely populated during the French and Spanish colonial period. Chênrière Caminada was granted to Monsieur du Rollin in 1763, and the Spanish government began to grant tracts on Grand Isle in 1781 (Evans et al. 1979:21-23). The first owner of record of Grand Terre was Joseph Andoeza, who received a grant for the island in 1794. The following year, François Mayronne (or Maronne) purchased the island from Andoeza. Mayronne owned Grand Terre in its entirety from 1795 until he subdivided it in 1821 (Swanson 1975:152). There is no documentation available that any improvements were undertaken by the owner or occupants of Grand Terre until after 1810.

During the Spanish colonial period (1762-1800) smuggling became endemic in Louisiana, as American and other merchants as well as the Creole inhabitants of the colony sought to evade Spanish commercial regulations. Early on, Barataria became an avenue for avoiding the

Spanish Customs at New Orleans. The Dubreuil Canal, dug in 1740, connected the Mississippi River to Bayou Barataria, and may have been used as a smuggling route in the French colonial period. François Mayronne and Jean-Baptiste DeGruy purchased a tract adjoining the canal at the Mississippi River in 1792, and Mayronne became sole owner in 1807. Ostensibly, the Dubreuil or Mayronne Canal was to be used as a millrace during spring high water on the Mississippi, and for hauling logs to the mill from the backswamps. However, it provided a convenient water route for boats to ascend from the Barataria basin to the river, and by the end of the Spanish colonial period, was probably a frequent smuggler's course (Faye 1940a:439; Swanson 1975:88).

The principal type of boat available to the bayou smugglers in this period was the pirogue. These were dugout canoes, usually made from cypress. Pirogues of the eighteenth century could be very large, up to 50 feet long and capable of carrying 30 men or over fifteen tons of freight. Most pirogues in use on the Barataria basin bayous were probably not nearly so large. The greatest disadvantage of pirogues was their instability, and several types of plank-built craft were used on inland waters during the colonial era. These included batteaux, flat-bottomed boats typically 20 to 40 feet in length. They reached an extreme length of around 80 feet. Batteaux were usually rowed or poled, but could be fitted with sails for use on open bodies of water. Steadier than the pirogue, the batteau also weighed less than a pirogue of equivalent cargo capacity, and supplanted the pirogue in settings where maneuverability was not at a premium. Numerous other small vessel types were used in Louisiana coastal and inland waters (Pearson et al. 1989:79, 89-90).

One advantage of Grand Terre over its neighbor Grand Isle was that it afforded a better harbor, closer to Grand Pass, where sea-going vessels of moderate draft could anchor in the protected waters of Barataria Bay and close to the shore of the island. However, access to Barataria Bay was limited by the shallowness of the bar, which from historical documentation seems to have been somewhere from nine to fifteen feet in depth. The shallow bar prevented larger vessels from entering Barataria Bay and anchoring behind Grand Terre or Grand Isle.

The Spanish were well aware of smuggling into Louisiana under their administration. The *Armada de Barlovento*, consisting of galleys and a few large sailing ships with 30 to 60 guns (Weddle 1991:18), was based at the Balize and patrolled the Gulf Coast, on watch for smugglers' vessels. Throughout the colonial period, the Spanish government had great resources for the colonial *guardacostas* or coastguard squadrons, and only became seriously overextended after the disaster at Trafalgar in 1805 (Faye 1940a:429). However, despite the availability of warships for colonial service, smuggling was rampant.

The Spanish Minister to the United States after 1784, Diego de Gardoqui, felt (along with many Spanish merchants) that colonial trade regulations promoted an enormous contraband traffic throughout the Spanish Americas (Clark 1970:232). Gardoqui wrote to José Moñino, Conde de Floridablanca, on May 12, 1787, stating that the contraband trade between foreign nations, including the United States, and Spain's Gulf possessions

...cause[s] annually the loss of a balance of perhaps twenty million pesos that we pay to foreigners, and unless these evils are attacked the Spanish artisan will perish and we shall have neither agriculture, manufactures, ships, troops, nor even credit and that would be a great evil...[quoted in Whitaker 1931:234].

In another letter to Floridablanca on June 9, 1787, Gardoqui complained that the smuggling trade between the United States and New Orleans was so extensive that he was handicapped in negotiations with the new republic (Whitaker 1931:234). In July 1790, Gardoqui expressed

his opinion in another letter, stating that the "illicit commerce" carried on in Louisiana was a "notorious fact" and

...whoever examines reports about this kind of settlement [Louisiana] will find that their principles are founded upon what they expect to get out of our own rich possessions, where goods from Spain arrive heavily surcharged... The situation of Louisiana is exceptionally favorable to this, and its inhabitants consist for the most part of people expatriated from various kingdoms because of irregular misadventures; so that if we add to this the propinquity of the English and Americans who hold the interior region, it appears that there is nothing strange about it [quoted in Whitaker 1931:119].

Gardoqui recommended liberalizing trade between Louisiana and Spain, but strictly prohibiting trade between the colony and the rest of the Indies, and all foreign countries in Europe and America (Whitaker 1931:119). To achieve this policy successfully was probably not possible given the physical limitations of Spanish power in Louisiana. Navarro, Intendant of Louisiana, and Governor Miro denied the existence of smuggling between Mexico, Cuba, and Louisiana (Clark 1970:232). However, Gardoqui was right, and the Spanish crown grew so incensed at circumstances in Louisiana that Governor Carondelet suffered a humiliating demotion for failing to enforce commercial regulations (Whitaker 1931: 235).

Both strategic and commercial security probably figured in Carondelet's suggestion to the crown on November 24, 1794, that a "fortin or blockhouse" costing about 2,000 pesos be built at Grand Terre (*Gran Tierra*). Mounting four guns of 12 caliber, the blockhouse "could advise of all news on that other part of the coast, and could guard the pass or channel entering the Mississippi a league above New Orleans" (quoted in Robertson 1911:332). There is no indication that such a blockhouse was ever built.

Smugglers did not only use Barataria as a point of entry to the Spanish colony. American vessels would enter the river from the Gulf and pass the Balize with cargoes in excess of manifest. At Plaquemines, small boats would meet the ships at night, receive the excess cargo, and carry it by way of a small bayou to Barataria Bay. From there the goods would be distributed westward on other bayous. However, in 1796, the intendency in New Orleans discovered the scheme and ordered that the hatches of all incoming vessels should be sealed at the Balize and not opened before arrival in New Orleans (Faye 1940a:439-440). It is possible that the tightening of Spanish Customs regulations encouraged the use of direct entry into Barataria Bay via Grand Pass.

With the transfer of Louisiana from Spain to France, and then from France to the United States, it is probable that the opportunities for smugglers in Louisiana waters became even greater. The Spanish *guardacosta* moved to Pensacola, but left the Pensacola station in 1811 (Faye 1940a:429). After this date, Spanish shipping on the Florida and Louisiana Gulf coasts were without a regular protective force under their own flag. The retraction of Spanish power on the Gulf Coast had dire consequences for Spanish commerce in the region (below).

The Baratarians, Laffite, And Grand Terre

Patriotism is the last refuge of a scoundrel.
- Samuel Johnson

The United States did not replace the Spanish pilot station at Grand Terre, and thus the civil authorities had not even a token presence at what was already an established route for smugglers seeking to avoid the customs authorities at the Balize or New Orleans. Governor Claiborne was aware of the smuggling problem early in his administration of the Territory. However, in 1806, Claiborne stated that he feared smuggling through Lake Borgne and the Terre aux Boeufs, not Barataria, which had become less profitable than the alternatives. In 1804, the importation of slaves into the Louisiana Territory was prohibited (Clark 1970:317)

to the consternation of short-handed planters and frustrated slave-dealers. To Claiborne, who personally abhorred the slave trade, the smuggling of slaves into Louisiana through West Florida was a particularly serious concern (Faye 1940a:440). In the first decade of the American period in Louisiana, smuggling and worse contraventions of law and order would attain unprecedented heights in Baratania. Furthermore, the recognized headquarters of the perpetrators of these nefarious undertakings would be Grand Terre Island.

The Baratarians, a conglomeration of smugglers, privateers, and pirates, and their operations on Grand Terre are the most colorful aspects of the history of the island. Among the prominent characters associated with Grand Terre in this period are the privateer captains Alexander (or Frederic) "Dominique" Youx (You), Vincent Gambie (Gambi or Gamby), René Béluche, Joseph Sauvinet, Louis Chighizola (alias "Nez Coupé"), Franco Tomas, Antonio Angelo, Captain Marqueire (Marco or Marcos), Antoine Semet, Pierre Cadet, Juan Juanillio (alias Gianni Barbe en Feu or "Flaming Red Whiskers"), Joseph Clement and several others. More famous yet are the brothers Pierre and Jean Laffite; and preeminent among them all is Jean Laffite. The Baratarians and Grand Terre were vividly described by R.P. Smith in 1834 in his novelette *The Baratarian Chief*:

... The Island of Baratania [Grand Terre]... is one of those low sunken islands, or rather clusters of sand bars which are so numerous in the Gulf of Mexico: -- hardly elevated above the reach of the equinoctial tornadoes, and owing to drought and heat, scarcely habitable for a considerable part of the year... Lafitte, accompanied by myself, immediately went on shore. A few groves of orange trees-- scattering peach trees-- and luxuriant vines, were to be seen, which contrasted strongly with the few miserable huts which formed the establishment of these outlaws of civilization; this congregated mass of refuse from every nation under heaven. Plunder, assassination, and murder were here legalized; power formed the only law, and every species of iniquity was here carried to an extent of which no person who had not witnessed a similar den of pollution could form the most distant idea. In this place, which as one of the pirates themselves observed, "was a hell upon earth and well stocked with devils of all ranks and degrees," were to be seen a few women who vied with the men in trampling on all decency and decorum, and whose language and manners were a compound of all the vileness, profanity, and obscenity which could be collected from the wretches with whom they associated... the crews of the piratical vessels when landed, and a division had been made of the plunder, commenced a scene of intoxication, gambling, quarreling, and murder, which still chills my blood to remember; and which the sabre of Lafitte was sometimes required to subdue. He alone seemed to possess any command over his passions, and his voice was never heard among them in vain; --while he shared the danger equally with the meanest sailor, whatever plunder was acquired was divided among them with the most scrupulous exactness, and his influence over them was great and their confidence in him unbounded [Smith 1834: 25-27, *sic* throughout].

This is a fancifully fictitious description of the Baratarians, Grand Terre and Jean Laffite. It is representative of both pirate stories current since Daniel Defoe and of the immense body of popular literature concerning Jean Laffite. There is an equally voluminous historiographical literature on the legendary leader of the Baratarians. Unfortunately, what historian Stanley Faye said about Jean Laffite in 1940 is true: "the world long ago made up its mind about Jean Laffite" (Faye 1940b:754). The popular image of Laffite is as a dashing swashbuckler, heroically patriotic at a crucial moment of trial in the history of the young American Republic. Ever since Arsène Lacarrière Latour wrote about Laffite in 1815 (Latour 1964), Laffite has gotten remarkably good press. Much of it is romantically fictional, as in the example quoted

above. Although there has always been a small minority of authors attacking the overwhelmingly positive view of Laffite (q.v. Allaben 1894), the accretion of legendary matter has produced a highly ahistorical image of the man that has become virtually impervious to assault by careful professional historians. Even some respected historical writings with wide currency have become colored with interpretations based on uncritical assumptions about documents and sources.¹ The situation in the present is such that historians such as Powell Casey (1963), John Sugden (1979), and Robert C. Vogel (1992), calling for a reliance on primary documentation and careful interpretation of source material, resemble voices crying in a wilderness of popular fictions. This study cannot attempt to discuss all of the issues surrounding the historical figure of Jean Laffite. However, substantial clarification of the activities of the Baratarians and Laffite at Grand Terre can be attempted, and in so doing, broader questions about the man and his historical significance must be addressed, if only briefly.

Reasonable evidence suggests that the Laffite brothers, Jean and his elder brother Pierre, were born in the Gascony region of southwestern France. Pierre was born in 1776 and Jean about 1780 or 1781. Original documents, bearing Jean Laffite's signature, indicate that he spelled his surname *Laffite*. The Laffites probably emigrated to St. Dominique at some point. They eventually left the island, possibly during the Anglo-French War or because of the revolution of 1803 that established two Black republics in Haiti. They may have arrived in Louisiana about 1804. There is no evidence that Jean Laffite had any training or significant experience as a sailor or seafarer. Stories of Laffite having been a sea rover prior to the period in which he became prominent with the Baratarians are purely fictional. However, Laffite and his brother may actually have managed their famous blacksmith shop in New Orleans (Faye 1940b:745).

The Laffites sought material gain not through honest labor, but through illicit activities, and they became involved with smuggling by 1808. In that year, President Jefferson forbade the import of British goods into the United States, and this embargo lasted fourteen months. During eleven months of this time, exports were also disallowed; these measures were an obvious stimulation to smuggling. Smugglers again were making use of Grand Pass and Barataria Bay as an avenue to the bayous south of the city of New Orleans, as they had during the Spanish regime. In 1808, Pierre Laffite set up a small establishment at "Barataria Island" (Faye 1940b:746). According to Latour, Barataria Island was the area between Bayou Barataria, Bayou Pierrot, and Lake Ouacha (Barataria Bay or Lake Salvador) (Latour 1964:13). However, both Grand Isle and Grand Terre were also referred to historically as Barataria Island or the island of Barataria (q.v. Faye 1940b:746; WPA of LA 1940:#746, #760). Here Laffite served as an agent or factor for the ships using the Barataria route to avoid customs and revenue inspectors at the Balize and in New Orleans.

It may be that Francois Mayronne, owner of Grand Terre since 1795, cooperated with smugglers not only by allowing them to use his plantation canal between Bayou Barataria and the Mississippi (see above) but also permitting them to use Grand Terre as a waystation where they could unload goods from ships and reload them onto smaller vessels. It seems more than coincidence that the Mayronne Canal was a main smuggling route throughout the period from 1795 to 1814, and during this same period Mayronne owned Grand Terre, the center of privateer/smuggler activity in Barataria Bay after 1809. It is even possible to speculate that the "Old Canal" on nineteenth-century maps of Grand Terre (Figures 3, 4, and 5) was constructed during Mayronne's ownership to provide a means of moving goods in small boats from sea-going vessels to warehouses or depots further inland on the island. However, there is no

¹ Perhaps the most dubious document that has been utilized in several studies of Jean Laffite is the alleged *Journal of Jean Laffite* (Laffite 1958). For discussions of its authenticity, see John L. Howells, *The Journal: Forgery or the Real Thing?* *The Life and Times of Jean Laffite* 1(1), 1981; Clancy DuBos, "Lafitte", *The Times-Picayune*, June 8, 1980; and Charles Hamilton, *Great Forgers and Famous Fakes*, Crown Publishers, 1980.

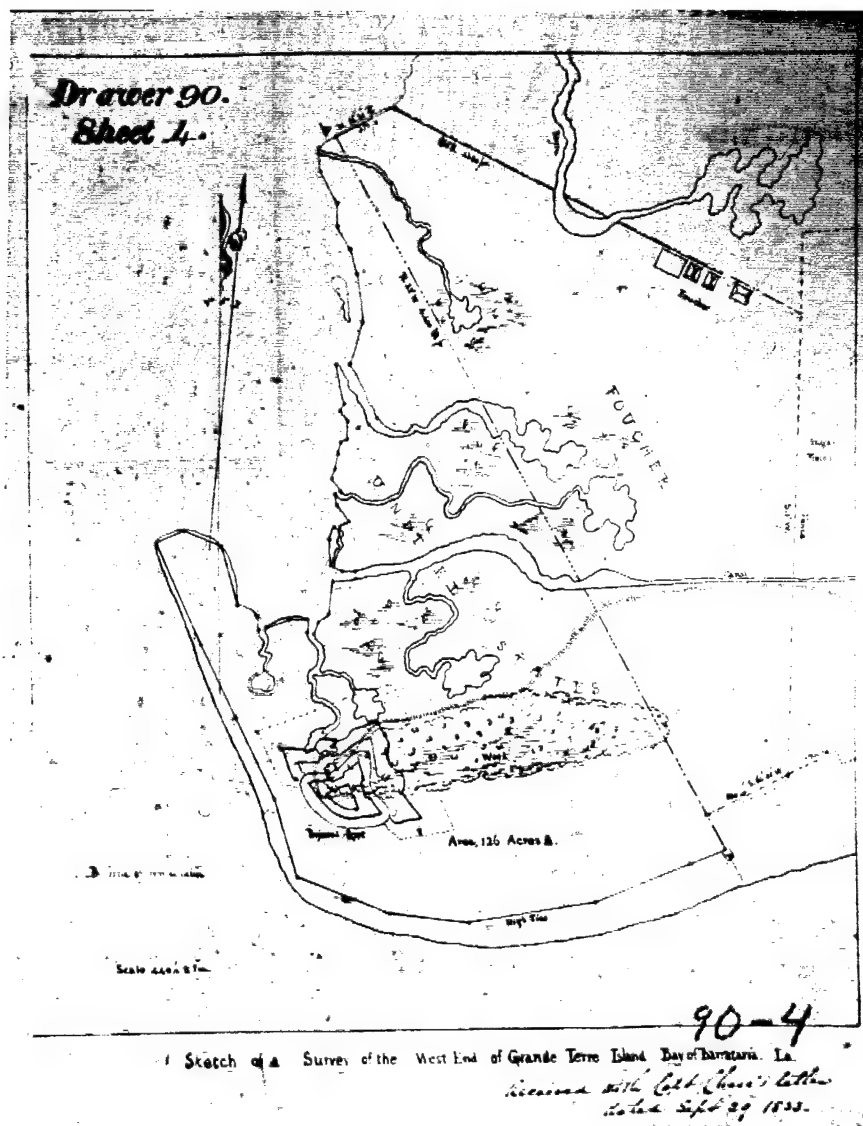


Figure 3. Survey of property purchased by the United States for the construction of a Fort at Grande Terre, 1833 (Cartographic Archives Division, National Archives).

documentation available as to when the "Old Canal" was built. At any event, the repeal of the Jefferson embargo in 1809 removed much of the impetus for large-scale smuggling, and the contraband trade diminished (Faye 1940a:440). The rise of the Baratarians, as the smugglers and privateers based on Grand Terre were called, postdated the period of the Jefferson embargo (Latour 1964:14).

The more prominent use of Grand Terre by privateers of the Gulf of Mexico and Caribbean begins in 1809 and ends with the suppression of the Baratarians by U.S. authorities in 1814. Privateering was considered a legitimate form of warfare between nations in the early-nineteenth century. This fact has often been invoked in positive depictions of the activities of Laffite and the Baratarians. However, privateering was regulated by national laws and international conventions. Privateers were to sail under national colors with valid commissions, and were only to attack ships under the flags of belligerent nations. Vessels taken as prizes were to be adjudicated at a legitimate prize court. In the United States, it was illegal to outfit privateers for cruising against the vessels of nations with which the U.S. was at peace. Piracy on the high seas, the indiscriminate capture of vessels of any nation, was universally held to be a serious and despicable crime punishable by the hanging of perpetrators. In an age when travel by land or sea was often highly unsafe and insecure, piracy was viewed somewhat less romantically than it sometimes was in later days when it was no longer a menace to lives and property. However, as was to be the case in Louisiana, it was not always easy for the system of due legal process to distinguish clearly between privateering and piracy. In the case of the Baratarians, eventually a number of interested parties vied for the application of legal procedures to their personal benefit.

The period of intensive privateer activity in Louisiana waters from 1809 to 1814 was a result of four major factors. The first was the course of military developments in the war between Great Britain and Imperial France. Second, were the rebellions against Spanish authority in New Granada and New Spain. Third, the United States administration prohibited the importation of slaves into Louisiana in 1804 and nationally in 1808 (Clark 1970:317), at a time when demand for slave labor was rising rapidly. Lastly, the isolation and lawlessness of Louisiana's southern coast permitted the privateers and smugglers a base for their operations.

A large number of privateer commissions had been granted by French Caribbean islands during the Directory and the Empire, but by 1806-1807, the number of commissions available began to decline. This was a consequence of British naval success in capturing the islands. By the end of 1809, only Guadeloupe and St. Martin's remained in French hands, and the following year both of these islands were captured by the British (Faye 1940a:433-435). New Orleans seemed an obvious base for supply and refitting of vessels carrying French privateer commissions. However, the United States was at peace with Britain and outfitting French privateers was a contravention of law. French privateers were only to be allowed entrance at American ports under conditions of distress. Nevertheless, privateers under French commissions were accustomed to entering New Orleans. French privateers were not welcome in New York, Norfolk, and Charleston by 1810, but in New Orleans, the technicalities of the law were virtually ignored, and the public reception of the French privateers was not hostile. A large percentage of New Orleans' population were recent refugees from the French Caribbean, many having been expelled from Cuba in 1808 after Napoleon's invasion of Spain. The United States was neutral in the conflict between France and the British-Spanish alliance and remained at peace with Spain after declaring war on Great Britain in 1812. However, public opinion in New Orleans was also strongly anti-Spanish (Faye 1940a:435; de Grummond 1961:10).

French privateers began sailing from New Orleans in January 1810. These ships were small, with large crews, and not supplied for lengthy cruises. It was only a matter of time before they began to return to New Orleans with British or Spanish prizes. Among these early

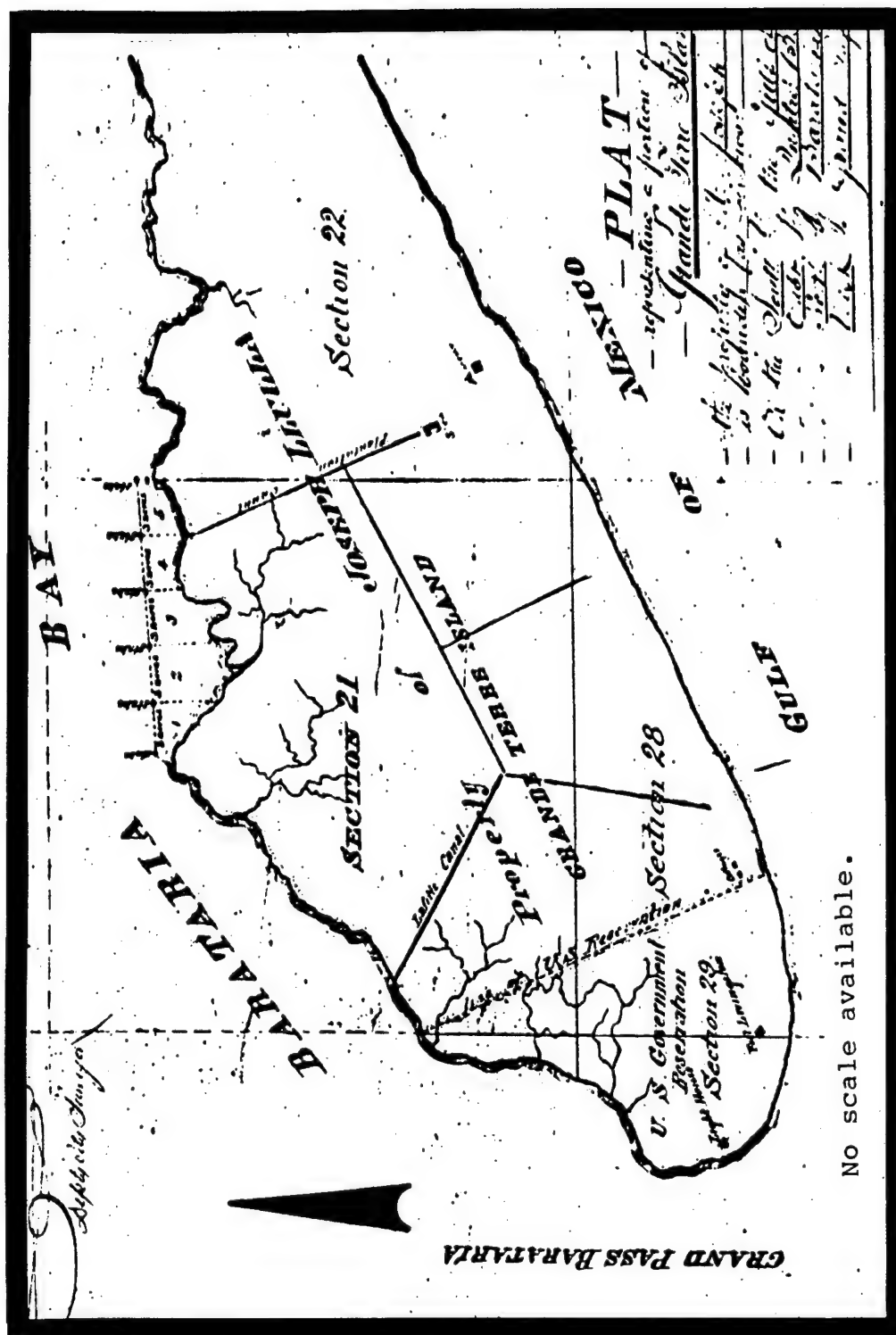


Figure 5. Plat Representing a Portion of Grande Terre Island, 1886 (from Goodwin et al. 1985, vol. III:98).

French privateers to sail from New Orleans was Joseph Sauvinet, a Gascon and known associate of the Laffites in later days. In April 1810, a privateer arrived at the Balize with a prize, a Portuguese slaver. On board were 105 enslaved Africans. The vessels and their cargo were embargoed by U.S. gunboats, and the case went into U.S. District Court. Several other cases of privateers with prizes were soon in the District Court in New Orleans. Commodore David Porter and other officers of the U.S. Naval station at New Orleans sought prize money and salvage money for vessels embargoed and condemned under admiralty and neutrality laws (Faye 1940a:435-436). The commandant of the New Orleans naval station in this period has usually been referred to as "Commodore" although this rank had not yet been instituted in the U.S. naval service.

Admirers of Laffite have attacked the United States naval officers at New Orleans for supposedly displaying avarice by pursuing what at that time were the customary awards to naval personnel. These same writers have often overlooked the fact that the operations of the Laffites and the Baratarians privateers were in no regard within the bounds of American and international law. In the case of the Laffites, it is often stated that there was no proof of their having encouraged or committed acts of piracy. In actuality, the Laffites did not captain the privateer vessels that they owned, which, of course, reduced the opportunities for them to personally supervise acts of piracy on the high seas. However, there is unquestionably a great deal of evidence as to the illegality of actions by the Baratarians for which they were responsible, as discussed in greater detail below. The Laffites were not charged with more than misdemeanors and never found guilty in a court of law, not because their actions were or should be defensible, but because the authorities failed to pursue legal recourse against the Baratarians with energy and conviction. The events of late 1814 and early 1815, namely invasion of Louisiana by British forces, has also distracted observers past and present from the nature of the Laffites' and Baratarians' activities. In any event, the pardon of the Laffites by President Madison in 1815 alleviated any necessity or even possibility of them being tried for crimes committed up to late 1814. It is ironic that the legend of Jean Laffite has become so powerful that representatives of constituted authority and the legitimate interests of the United States have been criticized for claiming what it was legal and valid for them to claim, while the Laffites have been excused for blatant criminality.

The privateer owners for their part also made use of legal resources in the U.S. District Court. The results were mixed, since Federal law was not entirely clear, and the District Attorneys only half-heartedly prosecuted the cases against the privateers. In the case of the Portuguese slaver, the prize was not detained and the Africans were sold privately in New Orleans for \$18,000 (Faye 1940a:435-437). In southern Louisiana's slave-hungry market, this price was a small percentage of what the Africans could have brought in an open auction.

Other privateers were merely fined, and some were cleared of embargo and not fined. The privateers soon had other legal problems. Their short-term commissions from French possessions began to expire, and even if the United States had been at war with Britain or Spain, the privateers could not have acted legally under French commissions. The question of valid French commissions became a moot point on May 1, 1810, when all communication between any French vessel and U.S. land, even in distress, was entirely prohibited by the United States government. In June 1810, the privateer *Epine* arrived at the Balize with a prize Cuban slaver, the *Alerta*, containing 170 Africans. The French commission of the *Epine* had been extended, and matters were too clear for the Court to be equivocal in their decision; the slaver, with its cargo, was returned to its Spanish owner and sailed back to Cuba under escort of a Spanish warship. The cases of the *Alerta* and the condemnation of the privateer *Duc de Montebello*, also in June, were clear signals to the privateers that they could no longer expect to operate out of New Orleans without great difficulty (Faye 1940a:438). The privateers needed a new base of operations, free of the scrutiny of customs and revenue agents.

By 1810, "Barataria," probably meaning Grand Terre and perhaps Grand Isle, had gained a reputation as a salubrious summer resort spot for respectable people (Faye 1940a:441). The tourists and holiday visitors soon found Grand Terre occupied by denizens even more picturesque than the crabs, pelicans, and other creatures occurring there naturally. In late summer 1810, the returning privateers began to steer to Grand Terre rather than to the Balize. The isolation of Grand Terre was both a positive and negative for the privateers. While it made it less likely that the privateers would be molested by the authorities, all supplies, such as cordage for rigging, sailcloth, munitions, provisions, and even lumber for building construction and ship repairs had to be brought to Grand Terre from the mainland or from Grand Isle. In this regard, the loss of access to New Orleans by the privateers was a blow to their operations. A document dated September 12, 1812, in The Historic New Orleans Collection shows that Frederic (Dominique) Youx paid M. Henri of Grand Isle \$544.00 for various goods, including horse fodder, fresh vegetables, meat, and "bread made by the inhabitants" (Evans et al. 1979:31).

The privateer *Sally*, a *falouche* owned by Louis Prince and Jean Robert, sailed from New Orleans in June 1810. "On the coast," presumably at Barataria and possibly at Grand Terre, the vessel increased her crew to 50 men, mounted a brass 8-pounder, and took on French Imperial colors. The *Sally* soon took a Spanish schooner containing \$23,000 in cash, and in August, brought to "the coast" a prize cargo of dry goods and a Spanish prize brig with 140 Africans. The cargo was sold at Grand Terre, the first documented case of the island serving as the commercial base of the privateers. The slaves were taken up Bayou Lafourche and openly sold at auction. The Spanish brig was burned (Faye 1940a:441). This was a practice of pirates to destroy evidence, since legitimate privateers could sell prize vessels awarded to them by a prize court. The authorities in New Orleans received complaints from the Spanish Consul and were not inclined to ignore these events. Warrants were issued in New Orleans for the arrest of Prince, Robert, and Captain Ange-Michel Brouard. Only Prince was apprehended, and he eventually jumped bond. Many of the slaves were recovered by the Sheriff and returned to the owners of the Spanish slaver (Faye 1940a:441).

There was a strong element of popular opinion in New Orleans in favor of tolerating the smugglers. The *Louisiana Gazette* editorialized in the summer of 1810:

Encouragement for French Privateers. If Mons. Turreau [French Minister to the U.S.] could prevail on Mr. Madison to withdraw the whole of the navy from our coast, we could be supplied with slaves on very moderate terms; as it is, with the assistance of skilful [*sic*] smugglers, well fee'd lawyers and hard swearing, we get negroes from Africa full as cheap as we formerly did [quoted in introduction by Jane Lucas de Grummond, Latour 1964:xxiv].

Such glib encouragement of the open defiance of authority and of the illegal and brutal trade in human beings may appear less humorous and worthy of approbation today than it did to newspaper writers and readers in 1810. It is certain that in such an atmosphere the authorities encountered difficulties in suppressing the activities of the Baratarians.

In July 1810, the privateer *Intrépide* under Captain Sauvinet appeared off the Balize with a prize, the *Invicta España*, with a cargo of iron, wine, dry goods, and \$6,000 in cash. The vessels sailed to Grand Terre, where the prize was driven aground by storms. The ships were unloaded and then burned. The *Louisiana Gazette*, reporting this incident, began a long-lived legend by stating that the privateers took their artillery ashore and constructed a fort. As pointed out by Powell Casey (1983), all reports of a fort at Grand Terre have been second-hand or apocryphal, while successive groups of American and British professional military men failed to note fortifications of any kind on the island in the period 1810-1815 (Casey 1983:101). An 1841 Corps of Engineers map and an 1853 U.S. Coast Survey map

(Figures 4 and 6) indicate "Laffite's Fort" at a location near the mouth of the Old Canal, in the northwestern portion of the island. Casey (1983) interprets these notations to be mistaken identifications of engineering works constructed by troops of the 44th Regiment of Infantry in spring 1815 (Casey 1983:71).

A 1914 travelogue by Charles Tenney Jackson entitled The Fountain of Youth (1914) included a photograph of a large brick structure, captioned "Site of LaFitte's fort at Grand Terre" (Jackson 1914:241). This subject of this photograph has almost certainly been misidentified. Any raised brick battery emplacement present during the period of the Baratarians would have drawn comment by one or the other military men who were on the island during this period. Standing next to a lower brick building in the photograph is a columnar structure, identified by Swanson (1975:151) as a sugar house chimney. Jackson's text does not describe any remains of Laffite's settlement on Grand Terre, but he does mention the "old round tower or cistern of bricks at Rigaud's landing on the bay shore" (Jackson 1914:291), which may in fact be the subject of the photograph, mis-captioned in publication. The association of the building with the columnar structure, evidently a chimney, suggests it is a sugar house cistern or some other feature of a sugar house.

The seemingly audacious provocation of building a fort, reported in the *Gazette*, was addressed by the acting Naval Commodore at New Orleans, Lieutenant Michael B. Carroll. Carroll stated that a U.S. gunboat had been guarding Grand Pass (Barataria Pass) and that no privateers had been seen at Grand Terre. The paper corrected itself concerning the fort; however, the remainder of Carroll's statement was soon brought into question when goods from the prize became widely available. The *Gazette* noted that merchants complained that they were being undersold; silk stockings from Cádiz sold at \$9.00 per dozen and "pig iron fell to one dollar a hundredweight -- on the coast" (quoted in Faye 1940a:442).

While the Spanish envoys in New Orleans and Washington complained vociferously, acting Governor Thomas B. Robertson issued a proclamation on September 6, 1810, concerning Barataria smuggling. Lt. Carroll sent a detachment of vessels from the New Orleans station to cruise west of the mouth of the Mississippi. These were the brig *Vixen* and the schooner *Carolina* (sometimes referred to as the *Caroline*). Four years later, this latter ship would participate in the raid that destroyed the Baratarians' base at Grand Terre, and in December 1814, played a prominent role in actions against the British during the campaign around New Orleans. Accompanying these two ships were three gunboats from the New Orleans naval flotilla. Not satisfied with these measures, the Spanish Consul in New Orleans requested a Spanish warship to cruise Louisiana waters (Faye 1940b:442).

It is worth noting that the privateers that sailed out of New Orleans and Barataria were extremely lightly armed. Their small ships usually carried only a few pieces of ordnance, frequently only one. Their cannon were usually relatively light guns, such as brass 8-pounders. This was in contrast to some privateers of the Napoleonic period that were much more heavily armed. In addition, the privateers probably only rarely, if ever, had enough firearms for all members of their large crews (WPA of LA 1940:#779). The idea that the Baratarians were "armed to the teeth" is simply another of the many myths about them. While the privateers could overawe the much smaller crews of unarmed Spanish merchantmen with fast sailing and aggressive threats, they were no match for vessels like the *Carolina* if it was necessary to fight. This schooner, of 230 tons burden, was armed with fourteen or fifteen guns, a mixture of longer-range guns and short-range, heavy-hitting carronades. The *Carolina* was only a small warship, but in fact, even the small gunboats on the New Orleans naval station were better-armed than the blue-water vessels employed by the privateers. These gunboats were open vessels about 50 to 70 feet long, with shallow draft. They were still capable of impressive feats of sailing. U.S. gunboat #5 had sailed across the Atlantic to fight the Barbary pirates before being assigned to the New Orleans naval station, where it was

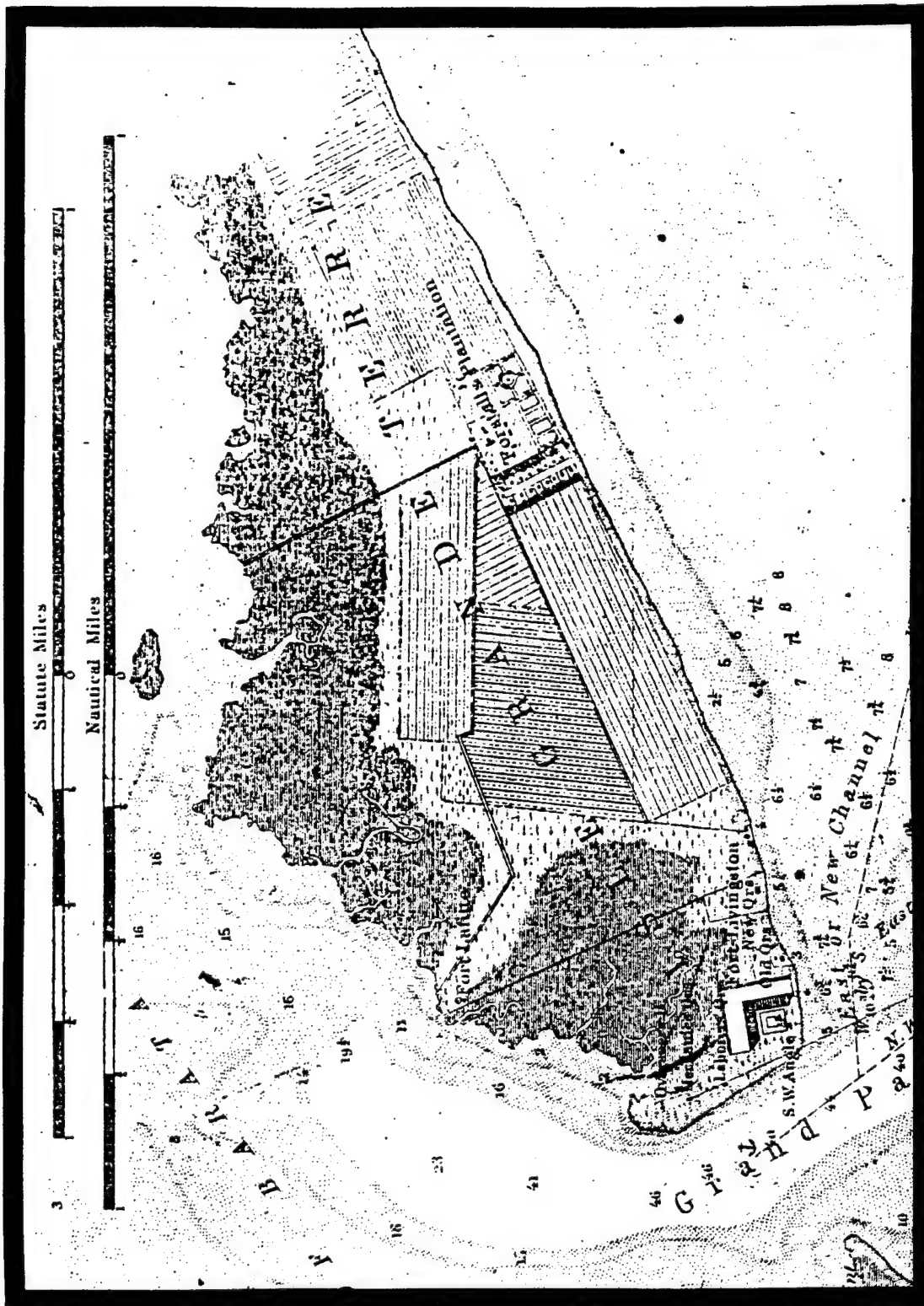


Figure 6. Excerpt from *Preliminary Reconnaissance of the Entrance to Barataria Bay*, U.S. Coast Survey, 1853 (Louisiana Collection, Howard-Tilton Memorial Library, Tulane University).

utilized against the Baratarians (1810-1814) and the British (1814-1815) (Chappelle 1949:196-218 passim). These U.S. gunboats typically carried an armament of five guns (Casey 1963:19), making them more heavily armed than the largest Baratarian privateer, the *General Bolivar* of 1020 tons burden, which had only four guns (Vogel 1992:166; c.f. WPA of LA 1940:#760). The privateers had no desire to encounter well-armed naval ships manned by professional gun crews and soldiers, and were defeated when they did.

Only a few armed vessels supplying the smuggling trade continued to cruise in Gulf waters during 1811. The French commissions had all expired, and in August 1811, the last open ports on Haiti were closed. In October, the attention of the Louisiana-based privateers was directed to a plan for attacking the Cuban port of Baracoa. Governor Claiborne heard rumors of these plans and "took steps" to prevent such a plan from being carried out (Faye 1940b:443). Smuggling in the waterways of Barataria Basin continued. In the autumn of 1811, the Customs authorities heard rumors of an illicit shipment of dry goods at Barataria. Midshipman Francis H. Gregory, acting Lieutenant, went down the Mississippi in a gunboat and sailed for Barataria Pass (Grand Pass). Another officer descended Bayou Barataria to Grand Terre. The naval forces found a prize Portuguese polacre and two other vessels anchored behind Grand Isle. The Baratarians attempted to flee, and then set their vessels afire. The U.S. forces managed to save the contents of the vessels as salvage (Faye 1939:1024).

In late fall 1811, other developments occurred to plague the Spaniards. On November 11, 1811, the province of Cartagena in the Viceroyalty of New Granada declared its independence from the Spanish crown. The thriving seaport of Cartagena, comparable in size to New Orleans at that time, with its hinterland, became a republic. Since Cartagena had no navy of its own, among its initiatives to resist the might of Spain was the issuance of commissions for privateers. Commissions from Cartagena would soon begin to appear in the hands of Louisiana privateers. Some of these commissions were probably issued in blank and completed at the convenience of the holders (Faye 1940a:747).

By March 1812, the Spanish consulate in New Orleans had received intelligence that cruisers under commission of Cartagena were about to sail in the Gulf. To add to Spanish worries, rumors were then current in the city of New Orleans that a group of adventurers popularly known as the "Barataria Association" were planning to attack St. Augustine, Florida, under the flag of Cartagena. This "Barataria Association" was similar to an entity formed about 1804, known as the "Mexican Association," and related to the later "New Orleans Association." These were organizations of speculating merchants, owners of privateers, and lawyers, some of them prominent personages in New Orleans. The Laffite brothers became agents of the Barataria Association both at Grand Pass and on the bayous of Barataria, probably supplanting a number of early contenders and competitors. Throughout the history of the Laffites in New Orleans and their involvement with smuggling and privateering, there is a complicated subtext concerning the insurrection against the Spanish crown in Mexico and various schemes put in motion by these related Associations.² Meanwhile, the involvement of the Laffites in Barataria and Grand Terre was entering its most important phase. Notably, it was Pierre Laffite, and not his younger brother, who was given the sobriquet "Emperor of Barataria" by virtue of his importance to Association operations and the illicit commerce of the Barataria waterways (Faye 1940a:443; 1940b:750).

By the autumn of 1811, the Laffite brothers had acquired two privateer vessels. The first, the *Misère*, a hermaphrodite brig, had captured the copper-bottomed Spanish schooner *Dorado* (also *Dorada* or *Dorade*). In the winter of 1812, the *Dorado*, with a commission from Cartagena, captured a Spanish schooner off Havana loaded with a cargo of tobacco. This

² A complete discussion of these Mexican adventures is beyond the scope of this effort. For further information see the work of Stanley Faye (1940b).

captured schooner was renamed the *Sarpis* (Faye 1939:1026-1027). With these vessels, the Laffites began to accumulate more prizes and outfitted some of them as privateers, captained by professional sailors. The Laffites eventually were at least part owners of these three privateers and two more, the *Blanque* and the *Philanthrope*; plus (probably) several other vessels (Faye 1940b:747)

By March 1812, matters had already become quite advanced in Barataria. The status of Spanish intelligence concerning the Baratarians is revealed in this letter of the Spanish Consul of New Orleans:

... Now we have to fear not only the French pirates who with their cruisers infest this coast, but also the native American privateersmen. I have quite detailed information on the conduct of these men and on the robberies they have made on our national vessels, carrying their booty to the Grand Isle of Barataria and from there smuggling it in to this city... the French, in number from 200 to 250 men, have fortified themselves completely in the Isle of Barataria, where they have a mount of fourteen guns. They have taken possession of Cat Island also and call it New France, and to that place and to Barataria they take all their loot. The government here is not unaware of it...[quoted in Faye 1940a:748]

As mentioned above, it appears from primary documentation that at no time did the Baratarians actually ever build a fort, either at Grand Terre or the Island of Barataria.

The policy of the United States vis-à-vis Spain during this period was complex. According to Faye (1940a), the United States government wanted Spanish shipping weakened, and ultimately, the collapse of Spanish authority in the Americas. This would bring about the opening of central and south American ports and the cession of the Floridas; "by acts of omission as well as by acts of commission President Madison maintained a policy of provocation and indirect aggression that he had inherited from President Jefferson and was to bequeath to President Monroe" (Faye 1940a:748).

Whatever the avowed or secret intentions of the U.S. government, the level of activity at Barataria accelerated with the availability of privateer commissions from Cartagena. The United States did not recognize the government of the Republic of Cartagena for some years, and during the time the Baratarians were active, any commissions from Cartagena were of dubious legitimacy under American laws. Governor Claiborne for his part sought to maintain a semblance of law and order, in the face of frequent complicity on the part of many Louisianans with the privateers and smugglers. The *Louisiana Gazette* reported on October 13, 1812, that some days before, Captain Frazer of the U.S. revenue cutter then at New Orleans was informed of a privateer or pirate near Barataria. Frazer raised a party of officers and with a Captain Holden took a small boat down Bayou Barataria toward Lake Ouacha. On the way they encountered a pirogue loaded with goods and crewed by six or seven smugglers; the smugglers fled the revenue officers and disappeared into the woods. Frazer took the pirogue to the head of the bayou, within one-half mile of the river. He asked a local farmer for the use of a cart and oxen to convey the goods to the river. The farmer promised to oblige, but at length the cart did not appear. Frazer sent an African-American boy to hurry the cart along. The boy was taken by the smugglers and tied up. At dark, the smugglers ambushed the revenue men, taking them prisoner and threatening their lives should they resist. The revenue agents were forced to descend the bayou some two leagues with the smugglers; but about ten o'clock at night, the agents escaped into the dark woods. With difficulty they reached the river late in the night (Kendall 1927:389). Claiborne, among others, was incensed by this bold disregard for constituted authority.

In mid-November 1812, an expedition under U.S. Army officer Andrew H. Holmes seized a number of boats in Barataria Bay containing a large quantity of cinnamon and other articles. On March 15, 1813, Claiborne issued a proclamation against the smugglers, calling them "banditti" who had

...on Lake Barataria... armed and equipped several vessels for the avowed purpose of cruising upon the high seas, and committing depredations and piracies on the vessels of nations at peace with the United States, and carrying on an illicit trade in goods, wares, and merchandise with the inhabitants of the state [quoted in Fortier 1914:467].

On April 7, 1813, both Jean and Pierre Laffite were indicted for violation of the revenue and neutrality laws of the United States (Fortier 1914:467-468). Writs were issued against them, but the brothers could not be found (de Grummond 1961:18-21). Despite indictment of the Laffites, the Baratarians grew yet more bold. On May 6, 1813, an armed boat captured a Spanish schooner in the Mississippi River below English Turn, carried the vessel out the ungarded Southwest Pass, and made a landing at Grand Terre (Faye 1940b:749). This was blatant piracy.

Evidently those who seized this Spanish ship did not know that a detachment of Louisiana Militia, mustered into Federal service as the Second Battalion of Louisiana Volunteers under Major H.D. Pierre, was encamped at Grand Terre. When the pirates arrived at Grand Terre, the soldiers seized the prize and cargo, but the pirates escaped. While these events went on, erstwhile privateer and acting U.S. District Engineer Captain Barthélemy Lafon was studying the ground of Grand Terre Island for the erection of a battery of artillery (Casey 1983:10, 71; Faye 1940b:749). A map of the western portion of Grand Terre, drawn by Lafon and showing the proposed battery site, is reproduced as Figure 7.

Barthélemy Lafon pursued a career as a privateer and smuggler for a time, and in the documentary record is often confused with his brother Bernard Lafon. In 1811, Bernard or Barthélemy evidently fitted out the brig *Flora Americana* at New Orleans for French service, which was illegal. In August 1812, while smuggling in Barataria, Barthélemy Lafon narrowly missed being captured by U.S. gunboat #156, when the 24-pounder gun on the naval vessel exploded. He apparently gave up on smuggling. Meanwhile, the *Flora Americana* evidently received an American privateering commission and sailed against British vessels. During 1813, Barthélemy was serving as a U.S. Army engineer. Either Bernard or Barthélemy evidently persevered in the vocation of privateer, although whichever one it was seems to have lacked a certain toughness associated with the likes of Baratarian privateers Vincent Gambie and Louis Chighizola. In the spring of 1814, Lafon outfitted the *Flora Americana* in New Orleans and sailed for Cartagena to get a commission. The *Flora Americana* took the Spanish merchantman *Viscount Wellington*, but then the passengers aboard the vessel overpowered Lafon and the crew and returned to New Orleans (Faye 1939:1017-1020, 1069-1070; WPA of LA 1940:#751). Back in New Orleans, Mr. Lafon found himself the defendant in a series of lawsuits brought by various blacksmiths, ship chandlers, and grocers for non-payment of bills incurred fitting out the ship (WPA of LA 1940:#707, #731, #741-#745). On September 16, 1814, the *Flora Americana* was seized in the naval raid on Grand Terre.

On August 29, 1813, the Laffites' ship *Sarpis*, under captain Marcos or Marqueire, captured the Spanish polacre *Dulce Nombre* with a cargo of cloth, wine, paper, cocoa, flour, crockery, and other articles. Because of the draft of the prize, it was not possible to take her over the bar at Barataria Pass. The vessel was taken to Attakapas point, off the mouth of the Teche. There, Dominique Youx supervised an auction of the cargo from the *Dulce Nombre*. Then the ship was burned, and the Spanish crew were taken further up the bay and released. They were not robbed of their pocket money by the Baratarians; instead, the Baratarians of-

ferred to convey their former prisoners to New Orleans for eight dollars apiece. The Spaniards accepted. Their captors had provided them with only 60 ship's biscuits to sustain twelve men (Faye 1939:1026-1028); this quantity would not have lasted many days had they attempted to walk to New Orleans.

The Baratarians seriously defied federal authority again in October 1813. A body of revenue officers came upon a large quantity of smuggler's wares in the Barataria marsh. Soon, a body of armed men, allegedly under the orders of Jean Laffite, came upon the revenue officers. In the ensuing melee, a smuggler named Andrew Whitman fired upon Revenue Officer Stout, killing him. The Baratarians recaptured the goods (Faye 1940b:749). In December 1813 and January 1814, revenue officers succeeded in apprehending two large pirogues on Bayou Lafourche loaded with illicit goods. One was laden with corn and dry goods hidden under straw. The other pirogue contained a load of iron, stamped with Spanish marks, hidden under potatoes (WPA of LA 1940:#746). These incidents illustrate the unromantic reality of the smugglers' occupation.

Claiborne issued a second proclamation proscribing the smugglers and privateers and on December 24, 1813, a \$500 reward was placed for Jean Laffite's arrest. Two days later, Laffite posted an offer of a reward of \$5,000 for the arrest of Governor Claiborne (de Grummond 1961:20-21), to the acclaim of Laffite sympathizers ever since. However, it was apparent to the Laffites that the authorities were becoming less tolerant of their open activities. Meanwhile, the troops at Grand Terre were withdrawn, allowing the Baratarians to make use of the island once more. In January 1814, the Customs service learned that a group of Africans from a prize cargo sold by the Laffite brothers at Grand Terre would be ascending Bayou Barataria. The revenue men were attacked while intercepting the Baratarians, and one of the officers was killed and eight others captured. The captured officers were threatened by the smugglers with deportation to Cartagena (Faye 1940b:749). Claiborne appealed to the state legislature for men and funds to "disperse these desperate men on Lake Barataria, whose piracies have rendered our shores a terror to neutral flags" (quoted in Fortier 1914:468). The legislature did nothing. On March 23, Claiborne issued a third proclamation against the Baratarians (Faye 1940b:749).

The federal government was justifiably incensed at the series of outlaw acts committed by the Baratarians, and writers about Laffite have too frequently ignored or downplayed the violent lawlessness of Laffite's followers. The wounding and death of federal agents caused by perpetrators of illegal activities would be treated as a serious matter today, but public apathy stymied efforts to curb the Laffites and the Baratarians. Throughout the spring and early summer of 1814 Baratarian privateers returned to Grand Terre with prizes, aggravating Spanish representatives in the United States and embarrassing federal and state authorities. On April 15, Captain Pierre Cadet of the *Legislateur* captured the schooner *Aimable Maria*, and returned it to Barataria, where Jean Laffite auctioned off the cargo. In May, Vincent Gambie in the *Philanthrope*, alias the *Petit Milan*, captured the brig *Fernando VII* and schooner *Marcela*, reaching Grand Pass on June 1 (Faye 1939:1034-1035). In July 1814, a grand jury indicted two Baratarian captains (one of them Juan Juanilio) on charges of piracy on the high seas. Pierre Laffite was named as an accessory. The grand jury called on Louisianans to aid in removing "the stain that had fallen on all classes of society in the minds of the good people of other states" (quoted in Fortier 1914:468) because of failure to suppress the Baratarians. On July 8, 1814, Pierre Laffite was arrested on the street in New Orleans, placed in the jail at the Cabildo (Faye 1940b:751), and held without bail (Vogel 1992:162). Jean Laffite publicly expressed disdain for the authorities' actions. In a letter to the *Louisiana Gazette* published August 18, 1814, he bordered on megalomania, styling himself "Napoleon Junior" (Vogel 1992:157). However, the arrest of Pierre Laffite may have signaled a change in public opinion, and Jean Laffite probably became aware that his situation was likely to grow more difficult.

Another event soon revealed more about the practices of the Baratarians privateers on the high seas and at Grand Terre. On August 10, 1814, the Spanish schooner *La Cometa*, under captain and owner Jayme Fontenals, sailed from Havana for Pensacola with a cargo of sugar, tafia, and coffee. On August 18, *La Cometa* was captured by the Laffites' *La Misère*, captained by Antonio Angelo. The master, passengers, and crew of *La Cometa* were not brutally handled, but were put ashore on the desolate Florida coast with inadequate supplies. After several days the victims of the privateers walked into Pensacola, "nearly naked and perished with hunger" (WPA of LA 1940:#730). Captain Fontenals of *La Cometa* proved to be a brave and determined man. The captain and crew of *La Misère* had made no attempt to disguise their identity. Fontenals sailed from Pensacola to New Orleans, and then to Grand Terre. He confronted the privateers, and "after some difficulty" he purchased back his ship from the Laffites for \$350. The ship was minus its cargo and required extensive repair and refitting. Fontenals was still at Grand Terre trying to get his vessel seaworthy when U.S. forces arrived on the island to suppress the Baratarians in September 1814 (WPA of LA 1940:#730).

Documents of the United States District Court contain a great deal about the operations of the Baratarians, the Laffites, and their base at Grand Terre, particularly for the period of about nine months immediately preceding the suppression of the privateers. Several depositions of witnesses taken in late 1814 and early 1815 describe the activities of the Baratarians at sea and at Grand Terre. Curiously, these documents have been referred to only selectively, and much information has often been overlooked or ignored. The District Court testimony of Edward Williams has frequently been cited in treatments of Jean Laffite's meeting with British officers at Grand Terre on September 3 and 4, 1814. Other portions of Williams' testimony about Grand Terre and Laffite are more damaging to a positive interpretation of Laffite and the Baratarians. Williams stated that he arrived at Grand Terre on July 11, 1814, having been engaged in New Orleans by Vincent Gambie to work aboard privateers as a seaman. Williams departed the island on September 16, during the naval raid by Commodore Patterson. Williams testified, among other things, that privateer vessels were fitted out, armed, and equipped at Barataria (in violation of U.S. law); that the privateer *Petit Milan* (owned by Captain Vincent Gambie, and probably with the Laffites as part-owners) took a Russian or Prussian prize (an act of piracy); that the persons assembled at Barataria appeared to be governed by Jean Laffite; and that "they and their associates appeared to be plunderers and robbers on the high seas" (WPA of LA 1940:#746, #760).

Several other witnesses made similar statements. John Oliver, a crewman of the Laffites' *La Misère*, stated that Jean Laffite appeared to be in chief command, with Vincent Gambie in authority when Laffite was absent. Oliver said that Laffite, Gambie, and their associates appeared to be sea robbers and plunderers, and that as he understood it, their vessels were without any regular commissions; but that while he was at Barataria, only Spanish and Portuguese vessels were brought there. The prizes were commonly burned after unloading. He estimated that there were about four hundred persons "at Barataria" when the naval expedition arrived, but that there were no cannon mounted on shore. The goods from the prizes were sold daily at public auction, and other goods were landed with the intent to smuggle them into New Orleans. When asked if he had ever seen a Customs House officer at Barataria, Oliver replied in the negative; when the prosecutor asked Oliver if he thought that a Customs officer would have been permitted at Grand Terre, Oliver replied wryly "I don't think they would" (WPA of LA 1940:#760).

William Hoey, a seaman, left New Orleans to sell provisions at Barataria in May 1814 and remained there until the raid. While at Barataria or serving on the privateers *Dorado* and *Petit Milan*, Hoey observed several prizes taken. *The Petit Milan*, he testified, captured a ship laden with dry goods, gin, and flour, which he believed was under Danish colors. The vessel

was burned after being unloaded. The *Philanthrope* sent in two prizes, one Spanish and with ingots of silver and gold on board, and both with cocoa and dry goods in their cargoes. The cargoes of the prizes were sold at Barataria. Daniel McMullen and other witnesses estimated that there were usually three or four hundred persons assembled at Barataria buying prize goods and selling supplies brought from New Orleans, and that indeed Jean Laffite had command, with Vincent Gambie as his subordinate. James Haskins went to Barataria in July 1814, seeking work as a sailor. He stated that the *Dorado* and *Petit Milan* brought in a Russian ship laden with dry goods and gin, and that "there was a great concourse of people at Grand Terre, sometimes as many as twelve hundred" (WPA of LA 1940:#760) buying prize goods and selling supplies.

Numerous writers seem to have assumed that everyone on Grand Terre was part of Laffite's "organization," but several witnesses make clear that a substantial portion of the people on the island at any one time were there buying and selling, and were not privateer crewmen or otherwise regular members of some Baratarian organization. It seems likely that the degree of order and organization imposed by Jean Laffite on the activities of the Baratarians has been inflated by writers and historians. Contemporary witnesses concurred that he had the greatest authority on Grand Terre, but the fact is that the specifics of Laffite's power are undocumented. The Laffites probably had little or no real authority over privateer captains that owned their own ships, and their capacity as "fences" for goods taken by the privateers was most likely a relationship of convenience. Jean Laffite was more likely a "first among equals" at Barataria and not an autocrat.

The claim that the Baratarians were not regular privateers is supported by a considerable body of evidence. The charge of piracy leveled against the Baratarians seems incontrovertible. Christoval Iuando was the owner of the schooner *La Caridad*, carrying provisions from New Orleans to Cuba in the autumn of 1812. Iuando testified that on October 2, 1813, his ship was pursued by "two vessels of a hostile and piratical character, which on getting within range of cannon shot, fired upon her, first hoisting American colors, and afterwards a strange flag... the flag of the insurgents of Cartagena" (WPA of LA 1940:#760). William Godfrey, who sailed on the *Petit Milan*, testified that he knew of the operations of the *Grand Milan*, under Captain Dominique Youx, fitted out at Cat Island. The crew of the *Grand Milan* was a mixture of Spaniards, French, and Italians, and the vessel had no French commission or any other. The "principal persons engaged at Barataria" were the two Laffites, Dominique Youx, and Captains Marqueire, Sauvinet, and Gambie, none of whom he believed to have any commission. He stated further that the vessels with "Carthaginian" colors had never been to Cartagena, and that he himself helped manufacture the flags. At least three privateers were fitted out and armed at Barataria; when the *Dorado* was fitted out, the captain was ordered to fly French colors (WPA of Louisiana 1940:#779). At this time (1814) there were no valid French privateering commissions available.

Michel Siroc, member of the crew of the privateer *Denis Sim* under Captain Franco Tomas, testified that under the colors of Cartagena they took Swedish, Spanish and Portuguese vessels, and also took a large Russian brig laden with sailcloth canvas, sheeting, iron, soap, etc. The captain of the Russian vessel died on board, and the remainder of the crew were put ashore at Cuba. Bertrand Priella, a crewman in an English schooner, stated that he was captured by an armed schooner called *La Mysell*, flying no colors. Priella and another Frenchman were taken aboard the pirate vessel, and the remainder of the crew were put in a boat. He spent one month on Grand Terre, having been hired by Jean Laffite to work on repairs to the *Petit Milan*. Joseph Sivane testified that he went to Barataria in August 1814, and while there saw the arrival of three privateers and four prizes. He stated that after one of the prizes, brought in by the *Dorado*, had been fully unloaded, Laffite ordered the ship burned. Sivane did not believe from what he saw that any of these privateers were commissioned by any nation, and said that he believed them to be pirates. They frequently changed the names of

their vessels. Sivane also reported that three pieces of cannon had been mounted on logs, which Laffite said were "to receive the Americans" (WPA of LA 1940:#779).

The above evidence was collected after the naval expedition against Grand Terre, but the amount of intelligence possessed by the military and civil authorities beforehand was undoubtedly imperfect. It is difficult to estimate the total value of shipping seized by the Baratarians privateers. Throughout this period, a large number of vessels were captured and taken to Chênrière Caminada, Belle Isle, Last Isle, Cat Island, Grand Isle or Grand Terre, or plundered at sea and destroyed. Spanish authorities guessed that privateer René Beluche alone captured and liquidated as much as one million dollars worth of Spanish shipping between 1812 and 1814 (de Grummond 1961:24). In retrospect, contentions that the Baratarians were really no better than pirates seem perfectly justified, and at the time there was probably sufficient evidence available to conclude the same thing. However, the wheels of government turned slowly in 1814. The executive branch finally determined on action in the face of the Baratarians' brazen flouting of law and order. In the summer of 1814, the Secretary of the Navy ordered Master Commandant ("Commodore") Daniel T. Patterson, of the New Orleans naval station, to destroy or disperse the illicit establishment of Barataria (Cusachs 1919:424).

The primary documents relating the events of the expedition of U.S. forces against the Baratarian base at Grand Terre provide some of the few reliable pieces of information available concerning the Baratarian establishment on the island. Meanwhile, the events themselves have been obscured by a series of erroneous statements and misinterpretations by serious historians and romanticists alike. It can be said that if Jean Laffite had been removed from the *dramatis personae* of events in Louisiana in the summer of 1814, either by arrest or by leaving the state and its waters, it is doubtful that any legend about him would have attained the monumental proportions that have developed. The invasion of Louisiana by the British provided Jean Laffite with the opportunity to begin the rehabilitation of his own reputation.

British strategic planners in the Caribbean were well aware of the Baratarians and their activities before their military operations began in Louisiana territory. The British *Naval Chronicle* published the following description, partly erroneous, in early 1814:

French Pirates

From America we learn that on a rocky island called Barataria adjacent to the mouth of the Mississippi a number of French pirates have formed a regular establishment. From thence they send out numerous armed vessels and grievously infest the coast of Louisiana, plundering and destroying the Spanish vessels and those of every other nation, the French excepted. The property they thus pillage they deposit within the ramparts of a fort which for this purpose they have constructed and provided with 14 pieces of artillery. To give a sort of character to these proceedings they have formed a tribunal which they denominate a court of vice-admiralty, and where they condemn without ceremony the property they have thus acquired. After judgment is passed, the merchandise is sold at low prices but for ready money and in an open market. This market is kept two days in a week; and if no buyer be found the goods are introduced into New Orleans as articles of contraband trade. Information of these proceedings has been given to the Governor-general of the Havanna and of the Floridas [quoted in Sugden 1979:160]

Obviously, Grand Terre could not accurately be described as "rocky." The fictional fort appears again in this second-hand report, probably derived in part from the *Louisiana Gazette*, and it seems unlikely that disposition of prize goods was undertaken in quite so neatly regulated a manner (Sugden 1979:160).

In May 1814, the British established a base at the Apalachicola River in Florida to coordinate military activity with the Creek and Seminole Indians. Captain Hugh Pigot of the British warship *Orpheus* and his subordinate George Woodbine gathered intelligence on the Baratarians and reported to their superior, Admiral Alexander Cochrane:

I am informed... the disaffected in Barrataria consist principally of French creoles and Indians that would cheerfully assist in any operations against the Americans if afterwards protected by Great Britain. They act as pirates to all nations, are in number about 800 and are daily increasing to the dread of New Orleans [quoted in Sugden 1979:161, *sic* throughout].

In his report to the Admiralty on June 20, Cochrane expressed the belief that 3,000 British troops, assisted by the Indians, Spaniards and disaffected French (meaning the Baratarians) "would drive the Americans entirely out of Louisiana and the Floridas" (quoted in Sugden 1979:161). On July 4, 1814, Brevet Major Edward Nicolls of the Royal Marines was commissioned a colonel commandant of a corps of approximately 500 Colonial Marines, which Nicolls was to raise to cooperate with the Indians. Admiral Cochrane's orders to Nicolls and to the naval commander of the expedition, Captain W.H. Percy, made no mention of the Baratarians, but Pigot's dispatch of June 8 was supplied to them. It was evidently Nicolls' idea to try to recruit the Baratarians to the British forces. In a report to Cochrane dated July 27, Nicolls stated that he planned to assemble a force of southern Indians, fugitive slaves, and the Baratarians. In another dispatch dated August 4, he reported that the Spanish Governor at Havana would not supply aid to his efforts. Nicolls was taken with a small expeditionary force to Apalachicola in early August and began organization of the Indians. However, toward the end of the month of August, Nicolls and most of his men had to move to Pensacola to assist Spanish forces there threatened by the Americans. British officers at Pensacola planned an attack at Fort Bowyer, Mobile, and it is probable that they hoped the Baratarians could be immediately utilized in this assault (Sugden 1979:162).

On August 30, Percy ordered Captain Nicholas Lockyer of the sloop *Sophie* to convey two officers to Barataria to confer with Laffite. These were Captain M'Williams, a deputy of Nicolls, and an officer of the 1st battalion of Royal Colonial Marines (Sugden 1979:162). Lockyer and M'Williams were instructed to offer Laffite a pardon for piracy and lands in the American colonies at the end of the war in return for his services and the restitution of any plundered Spanish property (Latour 1964:x-xi). Should the offer to Laffite be refused, Lockyer received "positive orders to receive restitution and, in the case of refusal, to destroy to the utmost every vessel there as well as to carry destruction over the whole place" (quoted in Sugden 1979:162-163). The famous meeting of Jean Laffite and the British officers on Grand Terre was imminent; this meeting would provide much inspiration to the romanticists and much of the material for historians sympathetic to Laffite.

The prevailing interpretation of these events on Grand Terre has been derived almost entirely from Arsène Lacarrière Latour's *Historical Memoir* (1964), usually assumed to be reliable and accurate. Latour's account of the events on Grand Terre has been excused from critical analysis for far too long. Besides reproducing several original documents, Latour purports to record the outline of conversations between Laffite and the British, and these reports have been reproduced and embellished countless times by both serious scholars and fiction writers. It must be pointed out that Latour was not present at Grand Terre during this meeting, and his version of events was probably, in large part, a product of information provided by Jean Laffite. In Latour's account, Laffite is characterized quite vividly as a clever, unshakable patriot, and the British appear as bumbler. Latour and Laffite had a personal relationship which included their shared experiences as spies for Spain in the period after the end of the War of 1812 (q.v. Faye 1940b; Latour 1964:introduction). In addition, there is

reason to expect, from Laffite's own statements, that he was an opportunist and guilty of dissimulation in his dealings with both the British and Americans. This circumstance would not be surprising. British documents (Sugden 1979) and other witnesses' accounts (WPA of LA 1940:746) allow what is probably a more accurate version of these events to be developed. In fact, the first-hand accounts of the conversations between Laffite and the British on Grand Terre by Captain Lockyer and sailor Edward Williams differ in significant details from Latour's account.

It is clear that the alliance of the British and the Baratarians would have been a case of strange bedfellows. British naval and military officers were distrustful of any persons resembling pirates, and the Baratarians had a highly developed dislike for the British (Sugden 1979:162). On June 23, 1814, a British sloop of war had sent its small boats against two privateer vessels anchored off Cat Island; fire from the privateers' cannon caused the British boats to withdraw. As the *Sophie* arrived at Grand Pass on September 3, 1814, an unidentified vessel, one of the Baratarian ships, appeared trying to clear the pass. The *Sophie*, under British colors (WPA of LA 1940:#746) fired on the vessel, causing it to run aground in the shoal water surrounding much of Grand Terre. This was an inauspicious beginning to the British effort to recruit the Baratarians.

The *Sophie* tacked about and anchored at the entrance to Grand Pass, raising a flag of truce (Sugden 1979:165). Some confusion resulted on shore as to the identity of the sloop. Jean Laffite, apparently thinking the vessel was a prize (WPA of LA:#746), went out in a boat to investigate. Only upon being overtaken by the sloop's pinnace, flying British colors and a flag of truce, did Laffite realize the nature of the sloop. In the pinnace were Lockyer, an interpreter, and M'Williams (Williams in Latour's *Memoirs*). The British officers did not recognize Laffite, being ignorant of his appearance, and asked him if he knew where Laffite was or if he was ashore. With some presence of mind, Laffite said that he was on shore (Latour 1964:18; WPA of LA 1940:746). Lockyer does not mention this temporary confusion over Laffite's identity (Sugden 1979:165). The British officers were persuaded to come ashore. M'Williams may have already given Laffite the packet of documents from Nicolls, the contents of which would be revealed on shore. Latour contends that Laffite was already manipulating the British officers to the benefit of the interests of the United States. According to Latour, near the shore Laffite identified himself, and told the British officers to remain silent as to their mission (Latour 1964:18), implying that British military men would not be welcome. From all accounts it seems that Lockyer and M'Williams were not in uniform.

The various accounts of what happened next are increasingly conflictual. According to witness Edward Williams, having landed, Laffite introduced himself to the officers; "the officer [M'Williams or Lockyer] then took him by the hand and accompanied him to his quarters" (WPA of LA 1940:#746). The Baratarians outside became angry over the British sloop's having fired on the vessel at the Pass. Williams testified that some of the Baratarians wanted to hang the officers, and Captains Youx and Marque (Marqueire) wanted to attack the British vessel (WPA of LA 1940:#746). Latour says that "two hundred persons" assembled, and, patriotic Americans that the polyglot Baratarians purportedly were, cried that the officers should be made prisoners and sent to New Orleans as spies. It is actually possible that Americans present on Grand Terre doing business with the privateers (WPA of LA 1940:#760) were most vocal in this call for taking the British officers to New Orleans. The assembled crowd were dissuaded by Laffite, Latour says, only with difficulty (Latour 1964:18). Lockyer depicts yet a different situation; he says that immediately upon landing, his crew, his officers, and himself were confined, insulted, and threatened, and the documents he was carrying from Nicolls torn up before his face (Sugden 1979:165).

Misinterpretation of the details of the British offers to Laffite has been frequent. Two stories are frequently circulated about the incident of Laffite's meeting with the British Offi-

cers. One is that he was offered a captaincy in the British Navy, and the other is that he was offered \$30,000 for his services. Laffite partisans point to these purported offers as evidence of Laffite's importance to the British and that his ultimate loyalty to the United States could not be overcome by such offers. Unfortunately, both of these versions of events are distortions of what could have happened. In fact, Laffite was offered a captaincy in the British *service* (Latour 1964:ix), and this has frequently become garbled into an offer of a naval captaincy. A captaincy in the British Royal Navy...

...was a rank of responsibility and prestige which required formal credentials which could not have been waived and which Laffite did not in any degree possess. All appointments of commissioned officers in the Royal navy were controlled by the Admiralty in Whitehall and a figure of the standing of Nicolls or even that of Cochrane could never have envisaged proffering such an inducement. Nicolls clearly had in mind a captaincy for Laffite [*sic*] in the Colonial Marines for which he was responsible and into which he hoped to incorporate the pirates. Admiral Cochrane had sought permission, successfully, to appoint officers to "local ranks" for precisely such a contingency [Sugden 1979:163].

Latour (1964) reported that Laffite was offered \$30,000 for his services by the British officers (Latour 1964:19). An offer of money may have been made to Laffite, but it is not mentioned in Percy's instructions to Lockyer, Nicolls' letter to Laffite, or Lockyer's official report of the meeting with Laffite. The immediate financial position of the Nicolls expedition makes it highly unlikely that any sum remotely resembling \$30,000 (£6,000) was offered to Laffite. Cochrane had ordered Nicolls to be strictly parsimonious in his extraordinary expenditures, for which he was allowed \$1,000 (£200). The expedition had been unable to support several thousand Indian allies and officers had been purchasing provisions with their own private incomes. Nicolls had no written authorization to offer Laffite cash and would have had to make any such large offer from his personal wealth. In 1815, Nicolls did recommend to the British government that cash awards and officer's pensions be offered to important Indian leaders. The highest sums mentioned were captaincy pensions of £95.16s.3d. per annum and grants of £300. The \$30,000 reputedly offered to Laffite by the British officers seems exorbitant (Sugden 1979:165). This has not prevented some writers from inflating even this amount, saying that Laffite was offered the ludicrous sum of £30,000 (\$150,000) (Swanson 1975:151). It may be that Latour simply stated what Laffite told him.

None of the British offers were likely to be persuasive to Laffite. In the first place, they were predicated on British victory in the war, which may have seemed possible but not necessarily probable. Latour (1964) reports that when Laffite hesitated to reply to Lockyer, the British Captain stated that "no reflection could be necessary, respecting proposals that obviously precluded hesitation, as he was a Frenchman, and of course now [September 1814] a friend to Great Britain, proscribed by the American government, exposed to infamy, and had a brother at that very time loaded with irons in the jail of New Orleans" (Latour 1964:20). The last matter mentioned was an important one, and Laffite was probably much affected by it. Should Laffite cooperate with the British, his position relative to the Americans would become unequivocal; his brother would be in peril and, if he did not know of preparations for the New Orleans naval squadron to attack Grand Terre, he could guess that such an attack would follow his siding with the British. Likewise, Laffite probably did not know that Lockyer had been ordered to destroy the Baratarian establishment should he refuse to cooperate, but the possibility of British attack may also have occurred to him. In addition, Laffite would have been expected to make restitution for captured Spanish shipping. It is very unlikely that he would have been willing or able to do so. Laffite's behavior after receiving the details of the British proposal has almost always been interpreted along the lines first set out by Latour (1964), in which Laffite is depicted as being an American patriot. However, this is only one of several possible interpretations of his actions.

Latour stated that Laffite excused himself from the officers after saying to them that he required a few days to decide, "his object in his procrastination being to gain time to inform the officers of the state government of this nefarious project" (Latour 1964:20). While Laffite was gone, the British officers were confined by Baratarians evidently wishing to send the British to New Orleans as spies. According to Lockyer, he and the marine officers were confined overnight, although their boat's crew was allowed to return to the *Sophie*. In the morning, the 4th of September, the boat's crew returned to Grand Terre and was also confined; the whole party was told they would be immediately sent to New Orleans (Sugden 1979:165). As Latour relates it, Laffite dissuaded the other privateers from their desired course of action, and in the morning saw the officers safely aboard their pinnace, apologizing profusely. Witness Edward Williams stated that "upon seeing the officer's commission the next morning everything was quieted and he [sic] was liberated" (WPA of LA 1940:#746). From this statement it is not clear if the Baratarians were calmed because their logic said that if the British were commissioned officers they therefore were not spies. "Commission" should perhaps be interpreted widely to mean all of the documents the officers presented to Laffite. It is also possible that the Baratarians did not understand that they were dealing with a British naval vessel prior to the morning of the 4th. It probably occurred to several of the Baratarians, including Laffite, that provoking the British Navy by mistreatment of two of its officers was a bad idea.

Williams said he understood that "Laffite said that tho' he smuggled he did not intend to fight the Americans" (WPA of LA 1940:#746). This is not a very fervent statement of patriotism; all the same, it seems highly unlikely that Laffite would have expressed these sentiments to Lockyer and M'Williams. In fact, Laffite may have been feeling that he was on the horns of a dilemma and that he must tread carefully to avoid antagonizing the British or the Americans, both of whom could destroy his establishment if they determined to do so.

The British concluded from the events of the 3rd and 4th of September that Laffite and the Baratarians could not be relied on for any assistance against the Americans. Most treatments of the events on Grand Terre concerning Laffite and the British ignore this point. Lockyer did not even mention in his official report that Laffite had requested any time to decide the matter, nor did any British vessel return to Grand Terre for Laffite's reply (Sugden 1979:166). This even raises the possibility that Laffite knew the British were not interested in any requests he made, and he understood that his choices now were limited. At best, he probably hoped to buy time to adapt his operations to an increasingly tense atmosphere. Although he evidently did not yet know about American preparations to attack Grand Terre, he may have feared such a possibility, as well as British reprisals.

The day the British left Grand Terre, September 4, Laffite prepared a letter that has been reproduced in countless scholarly and popular works about the Baratarian's leader (Latour 1964:xii-xiii). He sent the letter to Mr. Blanque, representative in the Louisiana Assembly, together with copies of the documents delivered by Lockyer (Latour 1964:vii-xii). In this letter, another sent on September 7th to Mr. Blanque, and one sent on the same date to Governor Claiborne, Laffite trumpeted his patriotism, asked for amelioration of his brother's situation, and claimed that his privateering activities were regular even if his smuggling was not. He blamed "vices" in U.S. Customs and revenue laws for his inability to abide by them. Many writers have taken Laffite's letters at face value, including his suggestions of the military importance of the information he forwarded. In fact, the strategic information contained in Lockyer's documents was useless to American forces, as could be expected since it was freely given by British naval officers into the hands of a privateer of unknown loyalty, or worse, a pirate. However, the floridly patriotic rhetoric employed by Laffite has persuaded many persons and been sufficient to erase the memory of several violent attacks on federal authority and the deaths of federal officers. There has generally been a remarkable willingness

to assume that Laffite was telling the truth about himself and the Baratarians privateers, when not telling the truth was even more in his interest.

Through his letters to Mr. Blanque, Laffite may have been attempting to delay the action against Grand Terre, which he suspected was coming, by making efforts to improve his stock with government figures. It is also possible that his principal motivation in writing the letters was to reduce any provocation that would result from the U.S. government thinking he might cooperate with the British. He may not have seriously expected that the offer of service to the United States made in his letter to Claiborne would be accepted, but it probably could only help his prospects of remaining unmolested for the time being.

Meanwhile, the day after Laffite wrote his first letter, September 5, Pierre Laffite escaped from the civil prison at the Cabildo (Vogel 1992:164). There is no documentary evidence of official collusion in Laffite's escape, and the escape may have merely been coincidental with Jean Laffite's letter. On the other hand, if official corruption was behind Pierre's escape, it probably could have been managed much sooner, instead of at what was actually the last minute. Despite Pierre's escape, Claiborne considered Jean Laffite's offer of cooperation, made in his letter of September 7. Claiborne felt Laffite's offer was serious enough to address it at a war council meeting with Commodore Patterson, Colonel George T. Ross of the United States Army, and Major General Jacques Villeré, commander of the Louisiana militia. The military expedition being prepared was actually delayed while Laffite's proposal was being considered. Claiborne was in favor of accepting Laffite's offer of assistance, but did not have a vote on the council (Vogel 1992:164). When a vote of the participants was taken, the military men voted in the negative. Only Villeré was in favor of accepting the Baratarians' offer (Fortier 1914:469).

With the matter decided, on September 11, Patterson sailed downriver from New Orleans with Colonel Ross and 71 men of the 44th Regiment of U.S. Infantry. The following day they met the *Carolina* at Plaquemines, and on the 13th, joined U.S. gunboats #5, #23, #156, #162, and #163 at the Balize. The dispatch boat *Sea Horse* and the tender *Alligator*, and an unclear number of armed barges also served in the expedition against Grand Terre. Table 1 provides information on the vessels. On the evening of September 15, the flotilla sailed from Southwest Pass into the Gulf of Mexico (Cusachs 1919:424).

By September 10, Pierre Laffite had reached Grand Terre, where he composed letters for Blanque and Claiborne, approving his brother's actions and stating that he was "fully determined to follow the plan that might reconcile us with the government" (Latour 1964:xv). However, about this same date, Jean and Pierre Laffite received information that a U.S. naval force was being fitted out in New Orleans to proceed against Grand Terre (Latour 1964:23). The Laffites evidently left Grand Terre very soon after receiving this information (WPA of LA 1940:#746), ascending Bayou Lafourche to the German Coast plantation of Alexander Labranche (Fortier 1914:469; Arthur 1952:89). Witnesses testified that despite knowledge that the expedition was being prepared, Jean Laffite and the Baratarians had not removed or concealed all of the goods they had at Grand Terre. They continued to have daily sales on the island, hoping to sell as many of the goods as possible before the arrival of the expedition (WPA of LA 1940:#760).

As mentioned above, it is difficult to say exactly how much authority the Laffites had over the actions of individual privateers and captains, at sea or on Grand Terre, romantic fictions notwithstanding. The treatment of the British officers on Grand Terre is a case in point. A large proportion of the Baratarians were for dealing harshly with Lockyer and M'Williams and were only with some difficulty persuaded by Laffite to leave them alone. The idea that Jean Laffite had the power to order Dominique Youx and large numbers of sailors to stay at Grand Terre, but not to fight the Americans while being captured, is unsupported by

Table 1. United States Naval vessels in the expedition against Grand Terre, September 1814. This table has been taken from Cusachs (1919:424), Vogel (1992:164), and Chapelle (1949:196, 218).

Vessel name	Vessel type	Master	Tons	Length	Beam	Draft	Crew	Armament (American sources)	Armament (British sources)	Builder	date built
<i>Carolina</i>	schooner	Lt. J.D. Henley	230	89'6"	24'4"	11' 4"	--	2 or 3 long 9-pounders, 12 12-pounder carronades	--	unknown, Charleston, SC	1812
#5	gunboat	Sailing Master John D. Ferris	--	50'4" or 71'	17' or 18'	4', 4'8½", or 5'6"	36	5 guns	--	--	--
#22 [or #23]	gunboat	Lt. Isaac McKeever	--	71'	18'	6'	39	5 guns	1 long 32-pounder, 6 long 6-pounders, 2 5-inch howitzers, and 4 swivel guns	John Cornell and Peter Mills, Charleston, (West) Virginia	--
#156	gunboat	Lt. Thomas ap Catesby Jones	--	60'	16' 6"	6'6"	41	5 guns	1 long 24-pounder, 4 12-pounder carronades, and 4 swivel guns	James Marsh, Charleston, SC, or Francis Sallus, Beaufort, SC	--
#162	gunboat	Lt. Robert Spedden	--	60'	16'6"	6'6"	--	5 guns	--	James Marsh, Charleston, SC, or Francis Sallus, Beaufort, SC	--
#163	gunboat	Sailing Master George Ulrich	--	60'	16'6"	6'6"	31	3 or 5 guns	--	James Marsh, Charleston, SC, or Francis Sallus, Beaufort, SC	--
<i>Alligator</i>	tender	--	--	--	--	--	--	1 4-pounder	--	--	--
<i>Sea Horse</i>	dispatch boat	Lt. Com. Louis Alexis	--	--	--	--	--	1 6-pounder	--	--	--

documentary evidence. It is merely a popular fiction that also defies logic. A more likely interpretation of the Baratarians's position (assuming they knew of Patterson's expedition) would be that they were hoping to sell off as much prize cargo as possible and then make themselves scarce before the expedition arrived, and simply miscalculated. John Oliver stated that a number of men from New Orleans were at Grand Terre on the morning of September 16th to attend an auction that was broken up by the arrival of Patterson and his flotilla (WPA of LA 1940:760).

Dominique Youx was in fact captured, as were other captains, and several vessels owned by the Laffites. The Laffites must have known that the loss of their ships and prizes in Admiralty court was possible, if not probable, should the Navy seize them. Logically, they should have removed as many vessels as they could from the Grand Terre anchorage. Why they did not, knowing the U.S. Navy was coming, is difficult to understand. It is also within the realm of possibility that the Laffites did not inform the other Baratarians that the expedition was coming. This would explain why the Baratarians were caught virtually flat-footed by Patterson when he arrived at Grand Terre. The Laffite's own departure from Grand Terre is probably best explained by a simple desire not to risk being captured by the American forces, as they were both under indictment.

The primary accounts of the U.S. naval attack on Grand Terre is contained in the official reports and letters of Patterson and Ross. Patterson's report was reproduced in the *National Intelligencer* and *Nile's Weekly Register* in late 1814 (Vogel 1992:165). The *Carolina* and accompanying vessels arrived at Grand Terre at half past eight o'clock on the morning of September 16, 1814. A number of vessels were sighted at anchor within Grand Pass, some of them with the colors of Cartagena on their tops (Cusachs 1919:424). The *Carolina*, with a draft of eleven feet, could not cross the bar, and waited off Grand Terre. The Baratarians had anchored their ships in a line in Barataria Bay, probably to inhibit any action by British ships cruising the Gulf (Vogel 1992:165). Patterson stated that at the time he interpreted this as a line of battle. After almost two hours, several pillars of smoke, thought to be signals, were observed on shore. At the same time, one of the schooners anchored at Grand Terre hoisted a white flag, an American flag, and the colors of Cartagena. Patterson replied with a white flag. At eleven o'clock, Patterson became aware that the Baratarians had set two of their own schooners on fire (Cusachs 1919:424-425). He ordered the white flag hauled down, and gunboat #156 raised another white flag with the motto "Pardon to Deserters," the signal for battle. The American vessels approached Grand Pass. Gunboats #23 and #156 grounded on the bar or just inside the bay, but the others crossed into the bay (Vogel 1992:165-166).

Despite a superiority in manpower, the Baratarians had no stomach for a fight and precipitously fled, in small boats and pirogues, without having offered the least resistance. The infantrymen under Ross landed on Grand Terre and Chenière Caminada, and Patterson's men boarded the Baratarian ships and prizes, dousing the fire on the *Dorado*, set by the Baratarians in an attempt to scuttle it. The Baratarians were pursued by the smaller American boats, but the great majority of the Baratarians made good their escape (Cusachs 1919:424-425; Vogel 1992:166).

Patterson commented in his report:

When I perceived the enemy forming their vessels into line of battle, I felt confident from their number, and from their very advantageous position, that they would have fought me. Their not doing so I regret. For had they done so, I should have been enabled more effectively to destroy or make prisoners of them and their leaders; but it is a subject of great satisfaction to me to have effected the object of my enterprise without the loss of a man [quoted in Cusachs 1919:425].

From the testimony of witnesses on Grand Terre at the time of the raid, it appears possible that the Baratarians were not expecting the arrival of the American forces, at least not so soon, and were certainly not prepared to resist with force. Patterson estimated some 500 persons at Grand Terre when he arrived (WPA of LA 1940:#760), but this may be an exaggeration. John Oliver, on Grand Terre during the attack, testified in District Court that there were about 400 persons "at Barataria" at the time of the raid, including those persons present for the auction, and that "with their arms and force they were capable, if inclined, of beating off the force or preventing them from coming in." Oliver stated that there were no cannon mounted on the shore, but about eighteen on the privateer vessels. However, at the time the expedition was sighted, "Laffite's men did not prepare for action, they had not men enough to move the privateers or fight these guns [on the ships] if they had a mind to" unless assisted by the New Orleanians present. When Oliver was asked if the commanders of the Baratarians manifested any intention to fight when they learned that the expedition had arrived; he replied "no, their intention was to escape" (WPA of LA 1940:#760). This testimony contradicts the image of disciplined privateer crews, under the command of Dominique Youx, following Laffite's orders not to fight the Americans.

About 80 persons were arrested on Grand Terre by the soldiers under Ross, out of the several hundred persons that were there when the flotilla arrived. Many of these persons were not captains and crews of privateers, but tradesmen, merchants, and probably assorted hang-ers-on. Among them was Alexandre St. Helme, owner of "a sort of cabaret" in New Orleans. St. Helme claimed in a District Court action in April 1815, that he was on Grand Terre at the time of the expedition, sick in bed at the home of a Mr. Dugas. While Dugas' house was being searched by the soldiers, St. Helme took a red Morocco portfolio from his own trunk, containing four doubloons in gold, a bank note, fifty dollars, and several private papers. The soldiers seized the portfolio as illicit goods (WPA of LA 1940:801). Unfortunately, other testimony in this case was unavailable, and it is impossible to say what St. Helme was doing on Grand Terre, or if his money was ever returned to him.

What of the fabled fort, the baracoons for slaves, the depots, the warehouses that reputedly had been built by Laffite's organization? Patterson reported that Ross' soldiers found only "40 houses of different sizes, badly constructed, and thatched with palmetto leaves" (Cusachs 1919:425). The Baratarians had apparently erected what has been interpreted as a "telegraph" or semaphore signal on the island (WPA of LA 1940:#760; Vogel 1992:167). There is unfortunately no further documentation of what was constructed by the Baratarians at Grand Terre. All of the structures were burned, after being emptied of their contents by the soldiers (Vogel 1992:167).

U.S. District Court documents contain an inventory of goods seized by the forces on Grand Terre (Table 2). The documents state that these items of foreign origin had been left or put aboard vessels, or unloaded onto the island, with the intent of avoiding the customs laws of the United States (WPA of LA 1940:#746). It is not a particularly glamorous assemblage of plunder, consisting mostly of dry goods of German and Russian origin. This circumstance lends credence to the testimony of several witnesses that the Baratarians had taken a German, Russian, or Scandinavian prize within months of the raid (see above) and may explain why this inventory has not been appealing to Laffite sympathizers. The taking of a prize from any of these countries would, of course, have been an undeniable act of piracy. Cartagena was not at war with Russia or Prussia; Imperial France was (until April 1814), but no French commissions were available. Initial reports in New Orleans valued the forfeit goods seized at Grand Terre at \$500,000, and such an amount has been subsequently reported by historians. The New Orleans press, however, quickly corrected the early reports by reducing this figure substantially, which has gone relatively unnoticed (Faye 1939:751). It is possible that some of the more valuable spoils of the privateers, such as specie, had been removed from Grand Terre

Table 2. Goods, wares, and merchandise seized by military forces of the United States at Grand Terre Island, September 16, 1814 (from WPA of LA 1940:#746).

18 bags chamomile flowers
 17 bags senna
 1 bag aniseed
 19 barrels antimony and blue stone
 3 barrels gum
 170 barrels salt
 2 anchors
 127 bars iron
 9 bars iron
 4 barrels glassware
 10 demijohns
 5 bundles paper
 7 sails
 1 sable
 2 boxes soap
 4 boxes containing 153 1/2 dozen glass tumblers
 14 bags coffee
 1 box of 54 pieces of German linen marked T No. 11
 1 box containing 43 pieces of German linen marked No. 5
 1 ditto No. 8 containing 53 pieces of German linen
 1 ditto No. 2 containing 48 pieces of German linen
 1 ditto No. 7 containing 55 pieces of German linen
 1 ditto No. 10 containing 50 pieces of German linen
 1 ditto No. 4 containing 86 pieces of German linen
 1 ditto No. 2 containing 31 pieces of German linen
 1 trunk containing 45 dozen and a half of silk stockings
 22 pieces of Russia sheeting
 6 1/2 pieces of sistadoes
 2 boxes of sewing silk
 3 bags of coffee
 48 bags of aniseed
 2 bales of paper [pepper]
 70 bales of cocoa
 23 bales of rope grass
 1 box of window glass
 2 boxes glass tumblers
 162 whole pieces of Russia duck
 43 loose pieces of ditto
 113 whole pieces of Russia sheeting
 41 loose pieces of ditto
 119 pieces of Ravens duck
 47 loose pieces of ditto
 8 pieces of ticklenburg
 17 pieces rolls
 3 1/2 pieces of blue plains
 8 whole pieces of Hessians
 2 loose pieces of ditto
 1 trunk containing 58 pairs of silk stockings
 1 box window glass
 1 chest containing 100 dozen glass tumblers

before the raid or were taken by the escaping Baratarians. Two of "Laffitte's men," Simon Pedro Dononette and Manuel Ribon, escaped the raid with their money and goods; these they deposited at "the Oak Ground, near the Big Island" (WPA of LA 1940:#746) possibly meaning Chênrière Caminada near Grand Isle.

The U.S. District Court records contain a cryptic entry concerning a cargo of slaves taken on Grand Terre in the Patterson raid. Patterson stated that Captain Mitchell, privateer master of the *Cometa*, had loaded the slaves at the "Island of San Andrews" (San Andrés off the coast of Central America) with the intention of introducing and selling them in Louisiana (WPA of LA 1940:#760). Unfortunately, no other information could be found concerning these slaves. They were presumably removed from *La Cometa* and put somewhere on the island, since Spanish owner Jayme Fontenals was at Grand Terre on September 16th trying to repair his vessel (above). The presence of the slaves indicates that the Baratarians continued to smuggle slaves into Louisiana until the U.S. suppression of Grand Terre.

It took the U.S. forces on Grand Terre several days to complete the job of destroying the establishment and collecting all possible salvage and prize goods and vessels. Matters were not over with the flight of the Baratarians from Grand Terre. On the morning of the 20th of September, the watch of the *Carolina*, anchored five miles off shore and sighted a strange sail to eastward. The unknown ship was the large privateer *General Bolivar*, of 1020 tons and four mounted guns, under the command of Captain Joseph Clement. The *Carolina* immediately gave chase. The *General Bolivar* sailed toward Grand Terre with all sail, but at half-past eight hauled her wind offshore to escape. Four of the U.S. boats, under the command of Lt. Spedden (or Spedding), blocked the Pass and harbor. At nine o'clock, the strange vessel opened fire on the *Carolina*, which returned fire with its long guns and raised U.S. colors (Cusachs 1919:425). The *General Bolivar* hoisted Cartagenan colors. After an exchange of gunfire lasting about an hour and within the three-mile limit of American territorial waters (WPA of LA 1940:#746), the *General Bolivar* went aground outside the bar. The *Carolina* hauled her wind offshore because of the shallow depth of the water. The gunboats opened fire on the *General Bolivar* from the Bay side of the Pass, even firing over the flat terrain of Grand Terre. At half-past ten the *General Bolivar* struck her colors and surrendered (Cusachs 1919:425). The U.S. boats seized the vessel, but virtually all of the 85 men on board escaped to land, where they were not apprehended (WPA of LA 1940:#760).

On the afternoon of September 23, the U.S. flotilla and a number of Baratarian prizes sailed for New Orleans. On the night of the 23rd, the crew of one of the privateer vessels managed to gain control of the vessel and escape the evidently lax security of the U.S. forces. The expeditionary forces and the Baratarian prizes arrived in New Orleans on October 1 (Vogel 1992:167).

Reconstructing how many vessels were at Grand Terre at the time of the raid, and how many were taken to New Orleans, is complicated. Documentation does not provide a clear number. Patterson reported capturing two armed schooners, six merchant schooners, one brig and one felucca on the 16th of September. Two schooners and one brig were so badly damaged by fire that they were judged beyond repair and scuttled by the U.S. forces (Vogel 1992:166). It is not known if these ships were included in Patterson's list of captured vessels. The *General Bolivar* was an additional vessel taken to New Orleans, but as mentioned above, the escapee reduced the list of prizes by one. Stanley Arthur (1952), working with District Court documents, came up with a list of 25 vessels captured on September 16, but this is certainly too great a number. However, most of the vessels actually seized at Grand Terre may be on Arthur's list (Table 3). Determining how many vessels were present is made more

Table 3. Hypothetical list of vessels captured at Grand Terre by forces of the United States, September 16-23, 1814 (from Arthur 1952:87-88).

Vessel Name	Vessel Type	Captain	Owner or captor
<i>Misère</i>	hermaphrodite brig	Antonio Angelo	Laffite
<i>Dorade</i>	schooner	Juan Juanillio, a.k.a. Sapia, a.k.a. Gianni Barbe en feu	Laffite
<i>General Bolivar</i> a.k.a. <i>Atalanta</i> , a.k.a. <i>La Cubana</i> , a.k.a. <i>Las Caridad</i>	schooner	Joseph Clement	Laffite
<i>Harlequin</i> a.k.a. <i>Experimenta</i>	schooner	--	--
<i>Last Prize</i>	schooner	--	Laffite
<i>Philanthrope</i> a.k.a. <i>Petit Milan</i> *	schooner	--	Vincent Gambie
<i>La Cometa</i>	schooner	--	--
<i>Surprise</i>	schooner	--	Laffite
<i>Demi Lune</i> a.k.a. <i>Half Moon</i>	schooner	Franco Tomas a.k.a. Captain Frank	--
<i>Lady of the Gulf</i>	schooner	--	--
<i>Louisa Antonio</i>	--	--	Laffite
<i>Wasp</i>	--	--	Laffite
<i>Republican</i>	schooner	Captain Farrel	--
<i>Melita</i>	schooner	Joseph Martino	--
<i>Amiable Maria</i>	schooner	--	Laffite
<i>La Flora Americana</i> *	brig	Bartholemy Lafon--not captured 9/16/1814	--
<i>Diligent</i>	brig	Captain Juanillio	--
<i>Cassadoré</i>	--	--	Henri St. Gême
<i>Non Such</i>	--	--	--
<i>Panchita</i>	--	--	--
<i>Spy</i>	--	--	Réne Béluche
<i>El Tigre</i>	schooner	Dominique You	Dominique You
<i>Nuestra Señora del Carmen</i> a.k.a. <i>Esperanza</i>	schooner	Julia Caesar Amigone	Julia Caesar Amigone
<i>Genny</i>	--	--	René Béluche

* According to Faye (1939), these vessels were not at Grand Terre when the expedition under Patterson arrived and were not captured.

difficult by the privateer practice of frequently renaming their vessels. For example, Vincent Gambie's vessel *Philanthrope* was originally called *L'Aquila* or the *Eagle*, and figures in several witnesses' testimonies under the name *Petit Milan*. The Spanish merchantman *La Cubana* was renamed by its Spanish owners *Las Caridad*, was named *Atalanta* after its capture by Laffite, and was called the *General Bolivar* when it fought its brief duel with the *Carolina* (Faye 1939:1035; WPA of LA 1940:#760; Arthur 1952:87).

The captured ships were sold in New Orleans but made little return for the U.S. Navy personnel who claimed them as salvage and prizes. The money from the sale of those whose Spanish owners could be found, minus court costs and salvage costs, was given to the owners. The *General Bolivar* was returned to Rene Beluche, who successfully claimed that he owned it. Beluche had avoided capture at Grand Terre. The cargo of the *General Bolivar* was sold. Patterson, Ross, and their men received one-quarter of the proceeds of the sale of this ship, totaling \$4,753. The *Dorado* was one of the vessels set on fire by the Baratarians on September 16, but it had been salvaged by the Americans. It was purchased by the United States, refitted, and commissioned the *Firebrand*. It served for some years on the New Orleans naval station, sailing against pirates and smugglers before being wrecked in a hurricane off Pass Christian on July 28, 1819 (Faye 1939:752; Vogel 1992:169).

It is not possible to address here the post-rehabilitation career of Jean Laffite. However, the events at Grand Terre in September 1814 do bear on the interpretation of the New Orleans campaign of 1814-1815. A persistent fiction about Laffite is that he provided a substantial amount of armaments and munitions to the American war effort. There is no credible documentation that this is the case, despite the prodigious quantities of gunpowder, cannon, and gunflints enumerated in the *Journal of Jean Laffite* (Laffite 1958). Primary documents indicate that Laffite, after the Grand Terre raid, supplied Jackson's forces with 7,500 gunflints (probably the contents of a few barrels) and a small quantity of small arms (Casey 1963:28). The alleged journal (Laffite 1958) says that Laffite supplied 366 cannon to Jackson, a preposterous number. Patterson's forces captured a mere 20 cannon mounted on the privateer vessels at Grand Terre (Faye 1940b:752), and the subsequent history of these artillery pieces, mostly of fairly small caliber, throws an interesting light on the old notion that Jackson's shortage of weaponry was significantly relieved by materiel and ordnance acquired from the Baratarians. The vessels captured by Patterson's men were sold on December 8, 1814; however, the armaments of the ships were to be sold separately at the Navy arsenal in New Orleans on December 14. This is hardly indicative that these pieces of ordnance were considered vital to the defense of Louisiana. In fact, the cannon were not sold on December 14 because reports arrived on that day of the British fleet entering Lake Borgne, and no purchasers attended the sale (WPA of LA 1940:#760).

Almost one year after the defeat of the British at Chalmette, Jean Laffite wrote a letter to President Madison in an attempt to receive restitution of some portion of his losses at Grand Terre, by dint of his service in the campaign of 1814-1815 against the British invaders. Laffite was nowhere near the smell of gunpowder during the campaign, serving as a guide for Major Reynolds in the vicinity of the Temple, on Lake Salvador, and for General Morgan on the west bank of the Mississippi (Casey 1963:28). In an example of what must have been prevarication, Jean Laffite wrote claiming that he "had not the least apprehension [*sic*] of the equity of the U.S.;" he had purposefully left his vessels at Grand Terre, he said, knowing that the expedition was being prepared against the establishment and

in spite of the representations of my officers who were for making sail to Cartagena... my view in preventing the departure of my vessels [*sic*] was in order to retain about four hundred skillful artillers [*sic*] in the country, which could be of the utmost importance for its defence [quoted in Faye 1939:752].

It is difficult to credit Laffite's claim in light of the observations of less-interested witnesses that the Baratarians were unable to man their twenty available guns effectively on September 16, 1814 (WPA of LA 1940:#760). The popular conception of the contribution of the Baratarians to the New Orleans campaign of 1814-1815 is exaggerated (Vogel 1992:168). There is little question that Dominique Youx's company of about 47 men, most of whom had probably been arrested at Grand Terre, served two cannon well in December 1814 and January 1815. They were explicitly recognized by General Jackson in a written commendation. However, Vincent Gambie and about 10 others went absent without leave prior to the final muster of the company. The Laffites and other Baratarians arrested at Grand Terre were pardoned by President Madison on February 6, 1815 (Casey 1963:28-29). Whether or not Madison took any notice of Laffite's letter ten months later, the federal government made no move to indemnify Laffite (Faye 1939:752).

Conceptions of Jean Laffite's importance are based upon a legend that has substantively distorted and exaggerated the historical figure; the legend is so strong, and the interest in realistic assessment so weak, that Jean Laffite is the only criminal to have a United States national park named in his honor. The Baratarians' operations at Grand Terre have been romanticized along with Jean Laffite, and popular treatments of the privateers' base depict a Casbah on the Gulf of Mexico. The reality was undoubtedly more prosaic. With Patterson's raid, the days of the colorful Baratarians at Grand Terre were over; but they would live on as an irresistible topic of writers of fiction, writers of history, and writers who could not tell the difference.

Grand Terre 1815-1888

The United States government did not lose interest in Grand Terre Island with the suppression of the Baratarians and the cessation of hostilities with Great Britain. On April 15, 1815, General E.P. Gaines, commander of the New Orleans Military Department, sent the 44th Regiment of Infantry to Grand Terre with orders to construct a stockade fortification as soon as possible. The troops remained on the island for three months. The ruins of this fort have apparently been referred to erroneously as "Fort Lafitte." This rudimentary fortification was not permanently garrisoned. In 1817, General Simon Bernard, head of the Board of Fortifications, visited Grand Terre with Captain Daniel Patterson to select the site for a masonry fort. Construction was not begun for some years, although appropriations for materials were made as early as 1822. In the lists of fortifications issued on February 7, 1821, and September 30, 1824, the Fort at Barataria or Fort at Grande Terre Island was assigned a perimeter of 308 yards. It was envisioned to have a wartime garrison of 400 men and a peacetime garrison of 80 men (Casey 1983:71, 101, 107; Greene 1982:254). The later history of this fortification is presented below.

François Mayronne evidently used the island for raising horses and cattle. Mayronne resided at his plantation on the west bank of the Mississippi, and not at Grand Terre. It is not known exactly what improvements were made on Grand Terre during his ownership, which coincided with use of the island by the Baratarians. Figure 7, the map of Grand Terre drawn by Barthélemy Lafon in 1813, has the designation "House" near the location of the "Old Canal," as the northwest-southeast canal was later known. Besides the tent encampment of the troops on the island and the projected fort, there are no other structures shown on Lafon's map. Although the canal is not shown on the Lafon map, it seems possible that the Old Canal was constructed during Mayronne's tenure of the island.³ It is also possible that the Old Canal was dug by the Baratarians, but this seems unlikely. It is more probable that the Old Canal was dug by Mayronne's slaves, or that they improved a natural channel in this location. The

³ This contention is supported by the ceramics recovered in this vicinity, as is discussed in greater detail in Chapters 6 and 7.

canal may have been excavated for Mayronne's use or possibly to facilitate the handling of goods by the Baratarians, who would have had to unload any vessels with draft too deep to cross the bar of Grand Pass. By the time a plat was drawn of a portion of Grand Terre in 1886 (Figure 5), the Old Canal was referred to as the Lafitte Canal, and the New Canal as the Plantation Canal.

The Baratarians constructed about 40 "houses" on Grand Terre between 1810 and 1814. The reported impermanent nature of these structures may explain why they are not shown on the Lafon map. All of the buildings on Grand Terre were probably destroyed by the U.S. expeditionary forces in September 1814. A romantic article in the *New Orleans Daily Delta*, dated December 24, 1854, claimed that the ruins of "Lafitte's" settlement were still visible at that date:

...Barataria, once so busy a scene... is now one of the most solitary, dreary, and desolate along the whole, low, flat coast of the gulf of Mexico... from [Fort Livingston's] ramparts the eye, following the winding strait, can discern the quiet little cove, now restored to its original desolation and solitude, and the dreary, storm-beaten shore, where a few dark mounds and crumbling heaps afford the only vestiges of the brief but brilliant reign of Jean Lafitte... [*The New Orleans Daily Delta* 1854:1]

Although the writer mentions no buildings at the site of Lafitte's settlement, an illustration accompanying the article, captioned "The Pirates' Retreat, in the Bay of Barataria," shows a two-story house or structure with galleries on all sides (*The New Orleans Daily Delta* 1854:1). If this structure was in fact at the site of the Baratarian settlement, it is almost certainly associated with the plantations occupying Grand Terre after 1821. It was gone by 1867, when an illustration in *Frank Leslie's Illustrated Newspaper* of the "Site of Jean Lafitte's Fort, Grand Terre Island" shows only an expanse of water and marsh grass (*Frank Leslie's Illustrated Newspaper* 1867:197). It should be noted that the 1833 map of property to be purchased for the construction of a fort at Grand Terre (Figure 3), shows three houses along the Old Canal at that date.

Jean-Baptiste Moussier acquired an undivided half-interest in the island from Mayronne in 1821 and the other half in 1823 (Swanson 1975:152). Moussier developed Grand Terre as a sugar plantation, borrowing heavily to pay for the purchase of slaves and sugar-processing equipment. Moussier and his family resided in a townhouse in New Orleans, with four female slave domestics, and overseer Louis Wagner managed the "Grande Terre" plantation. No census information is available for Grand Terre from the 1830 census. Moussier died on June 11, 1831, at his New Orleans townhouse, leaving an estate with large unsettled mortgages and debts. His total indebtedness was \$152,199.02½. His widow, Marie Elizabeth Cloë Lezongar de Lasalle, and heirs renounced the succession, causing an inventory to be conducted of the plantation in June 1831 (Succession #46, Jefferson Parish Probate Records, JPCH). The real estate and moveable property of the inventory are presented in Table 4.

Several characteristics of the slave force at Grande Terre plantation are worthy of comment. Most striking are the imbalance in the sexual ratio of the slave force, with 37 males and 24 females, and the disparity in average ages between males and females. The age and sex distribution of the Grande Terre slaves in 1831 are shown graphically in Figure 8. The average age of the male slaves (including children) was almost 30 years, while the average age of the females was slightly less than 20 years. Only eight of the male slaves were juveniles under 13 years of age, while 11 of the female slaves were 12 years of age or younger. Of the total number of slaves, 46 percent of the females were children but only 22 percent of the males. Among the slaves 13 years of age or older, the average age of the male slaves

Table 4. Inventory of the Grande-Terre Plantation, conducted June 27, 1831, from the succession of Jean-Baptiste Moussier (Succession #46, Jefferson Parish Probate Records, JPCH).

Land.

A tract of land or Island, known under the name of Grande-Terre of Barataria, established and cultivated as a sugar plantation... together with the sugar house, draining house, steam engine, dwelling house, negro cabins and all other buildings and improvements... the present sugar crop consisting of one hundred & thirty arpens of canes more or less, of which 56 arpens are of plant canes and the remainder rattoons valued together at the sum of \$38,000 dollars--

\$38,000

Slaves.

Charles (commandeur), aged about thirty five years, a brick layer, having been wounded in the belly... \$500.

Ben, aged about forty-five years (a field hand)... 450.

Nelson, aged about twenty-five years (a field hand)... 700.

Relf, aged thirty-five years (a field hand)... 650.

Billy Sinton, aged about thirty-three years (somewhat an engineer)... 650.

Robert, aged about twenty-five years (a field hand)... 650.

Jack Harding, aged about twenty-nine years (a field hand)... 640.

Samlett, aged thirty-five years... 640.

Bolen, aged about twenty years (a carter and ploughman)... 700.

Georges, aged about sixty years (a field hand)... 300.

Sim, aged about forty years, (a cooper)... 700.

Henry, aged about thirty-three years... 650.

Steven, about forty-two years of age (a field hand)... 500.

Joshua, aged about forty (a carter)... 500.

Bartlett, aged about forty-three years (a carter and ploughman)... 500.

Jack Hall, aged about fifty five years, (somewhat of a carpenter)... 350.

John, aged about thirty-two years (a carter and field hand)... 500.

Sam Brown, aged about thirty years (a carter and field hand)... 700.

Billy Reed, aged about forty years (a carter and ploughman)... 700.

Wyer, aged about twenty-four years (a carter and ploughman)... 700.

Harry, aged about sixty-three years (a cripple)... 60.

Bolier, aged about forty-five years (a sawyer & somewhat of a blacksmith) inclined of running away... 500.

Sam alias Governor, aged about forty-six years (a carter and ploughman)... 650.

Sam, aged about twenty-three years (somewhat of a carpenter)... 500.

Pleasant, aged about sixteen years... 450.

Peter, a griff, about sixteen years of age, (a carter)... 500.

Morris, aged about fifty-two years (a field hand)... 350.

Volsey, a mulatto (a carter, ploughman and pilot) aged about eighteen years... 1000.

Daniel, aged about fifty-five years (blind)... 25.

Moses, aged about twelve years... 250.

Joe, aged about ten years (an orphan)... 300.

Marie, a creole of St. Domingo, aged about forty-five years, with her child named Juliette, aged nine years, valued together at... 900.

Louise, aged about thirteen years... 400.

Belinda, a griffe, aged about forty years, (a washer and house servant), with her two children named Fanny, aged four years, & Edmund, aged two years, both of them griffs... 900.

Sally, aged about forty years (a field hand), inclined of running away... 200.

Scily, aged about sixteen years (a field hand), with her child named Delphine, aged two months... 500.

Sarah, aged about twenty eight years (a field hand), with her child named William aged fifteen days... 400.

Betsey-Ben, aged about forty years (a field hand) with her four children named Relf aged nine years, Suzanna, aged six years, Vincent, aged two years, and Caroline, aged three months... 1100.

Lucy Good, aged about eighteen years (a field hand), with her two children named Christophe, aged two months, and Hetty... 650.

Feeby, aged about fifty-three years (a field hand), with her child named Rachel, aged four years... 400.

Franky, aged about twelve years... 250.

Aggy, aged about forty-five years (a field hand), somewhat a runaway, with her child named Polly, aged nine months... 400.

Betsey-Relf, aged about twenty-five years (a field hand), with her two children named Zacharie, aged seven years, and Medard, aged three years... 700

Esther, a griffe, aged about forty-five years (a field hand), with her child named Silly, also a griffe aged two years... 350.

Christine, aged about thirty years (a house servant and somewhat of a sempstress/infirm)... 250.

Lucy, an orphan, aged thirteen years... 350.

Harrison, son of Saïza now in New Orleans, aged five years... 250.

Pleasant, an orphan, aged ten years... 300.

Jenny, an orphan, aged six years... 150.

Suzannah, aged about forty years... [not valued]

[total value of slaves] \$21,905.00]

The Stock, Poultry, & al.

Fourteen American horses, valued together at \$600.

Four Creole horses... 10.

Five Mules... 250.

Two hundred and twenty-five head of horned cattle, more or less... 1350.

Three pairs of draught oxen... 60.
Twenty-five sheep... 50.
The poultry... 50.

[total value of livestock] \$2370.00

Farming Utensils

Twenty-three axes, valued together at... 10.
Forty-three hoes... 30.
Thirty-three spades...25.
Eight ploughs... 32.
Five harrows... 25.
Two plough molds... [not valued]
Seven horse carts, with their harness... 180.
One ox cart... 30.
One pair of wheels... 30.
Thirty "fancilles" and six scythes... 15.
One lot of blacksmith's tools... 80.
One lot of carpenter's tools... 25.
One lot kitchen utensils... 10.

[total value of tools] \$420.00

Household furniture

Fifty volumes of various works... 15.
One old side-board... .25
One lot earthenware Glassware... 7.00
Three old wooden chairs... .50
One bedstead, bed, and bedding... 7.
One clock... 5.
One scale... 100.
One pair fenders... 1.50
One looking glass... .50
One [...?]... 5.

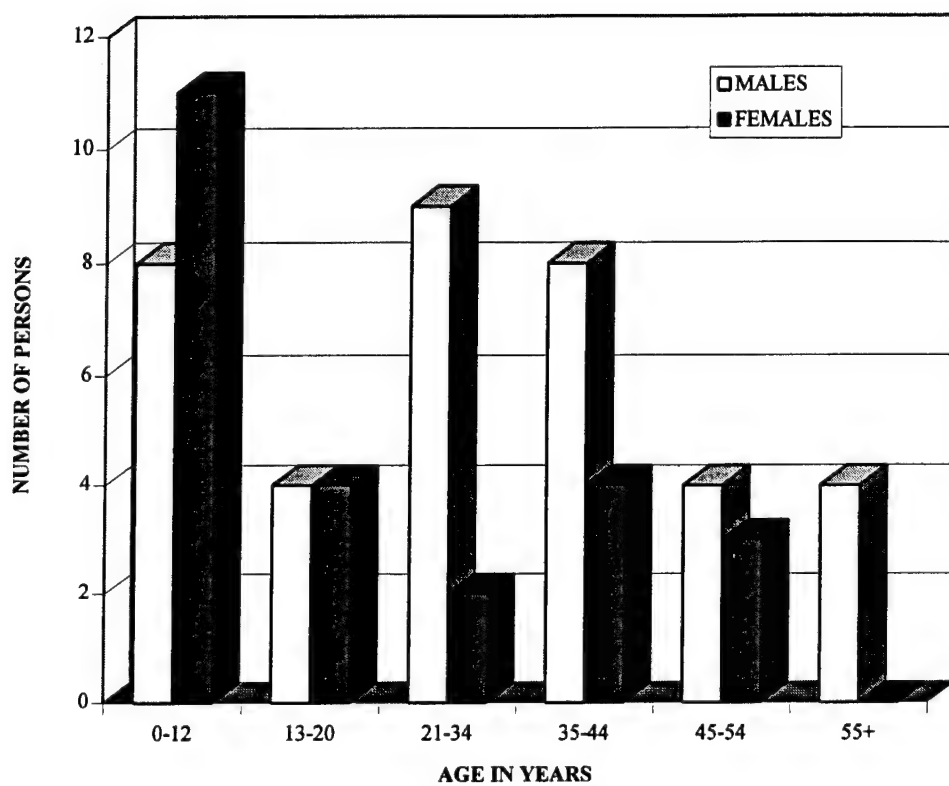


Figure 8. Age and sex distribution of slaves at Grande Terre Plantation, June 27, 1831 (from Succession #46, Jefferson Parish Probate Records, JPCH).

contrasts less strongly with the average age of the adult female slaves. The average age of the adult male slaves was almost 36 years, while the average age of the adult female slaves was slightly more than 32 years. However, male slaves in the prime of life, aged 21 to 34, outnumbered females in the same age range by more than four to one. Sixteen male slaves were 35 years of age or older, and 7 female slaves (of a total of 13 females 13 or older) were in this mature adult range. A relatively large number of male slaves, one-half of those over 35, were 45 years of age or older. In short, the slave population at Grande Terre was predominantly male and generally older than usual, particularly among the males.

The pattern of sex and age distribution at Grande Terre plantation is consistent with an interpretation that Moussier had acquired a force of adult field hands, which at some point were reinforced by a number of additional adult males but relatively few females. Moussier probably purchased male field hands while striving to increase sugar production and without concern about the sexual imbalance of the total slave force. With the overextended state of his credit, his primary goal was probably to maximize productivity as quickly as possible and worry about building a stable and balanced slave force that could grow, through natural increase, sometime in the future. Unfortunately for the slaves at Grande Terre, such a future did not arrive under Moussier's ownership. The social implications of the age and sex imbalances for the slaves on the Grande Terre plantation are undocumented, but are likely to have contributed to problematic conditions on the island. It is not surprising to encounter in the succession slave list the notations that Bolier, aged 45, and Sally, aged 40, were "inclined of running away." This characteristic probably reflected a number of exigencies of life in bondage, and not merely an imbalance of demographic factors on isolated Grande Terre.

The great majority of the slaves at Grande Terre were field hands, but many of them also had occupational specializations. Notable among the individuals listed in the succession inventory are Charles, the "commandeur;" probably a title indicative that he was chief driver. Billy Sinton was "somewhat an engineer," and Bolier "somewhat a blacksmith." Sim was a cooper, an important job on a sugar plantation. There were several carters and ploughmen, and in addition, Volsey was a pilot, a useful skill on the island. Volsey's knowledge of sailing and the waters around Grande Terre undoubtedly contributed to his valuation of \$1000, the highest in the list. Two of the women were house servants, and one of these, Christine, was "somewhat of a sempstress [*sic*]." However, an unspecified infirmity lowered Christine's value. As is typical in slave inventories, adult men are appraised at the highest values, while women and children are usually rated significantly lower. Evidently, the reproductive capacities of women did not countervalue the physical strength and stamina of men. Children were economically unproductive and had to be maintained into adolescence before they could make any return for the planter. Similarly, aged and infirm individuals were an economical burden, as demonstrated by their low valuation in inventories. However, the complex relationship of individual masters and slaves sometimes overrode purely economic motivations when it came time for slaves to actually be sold. A case in point is that of Blind Daniel, purchased at the succession sale by Gustave Moussier, Jean-Baptiste Moussier's adult son, when the rest of the slave force was being conveyed along with the plantation to new owners (Succession #46, Jefferson Parish Probate Records, JPCH).

Unfortunately, there is no available documentation of how the slaves lived at Moussier's Grande Terre plantation. It is not even known if the slave cabins in this period were in the location of the later Forstall plantation quarters (below). Whether or not any number of possible factors may have made the conditions of their lives particularly harsh, it is certain that laboring on a sugar plantation on the island of Grand Terre was hard work; and the opportunities for social life enjoyed by slaves in New Orleans and on the great sugar plantations of southern Louisiana were unavailable (see Yakubik et al. 1994, vol. I). Furthermore, Grand Terre was particularly exposed to severe hurricanes, and these must have sometimes

caused the loss of housing and garden crops. It is possible that the plantation sugar house served as a refuge for the slaves in the worst storms.

Moussier was continuing to invest in improvements at Grande Terre up to the time of his death. Brickmason Philippe Brugier made a claim against Moussier's estate for work he performed on the Grand Terre plantation and for which he was not paid in full. In October 1830, Brugier performed work on the plantation which he itemized in the statement reproduced in Table 5. In December 1830, Brugier performed further mason's work, as detailed in his statement in Table 6. Witnesses made depositions in probate court for Brugier concerning his work on Grand Terre. Philippe Bontté testified on January 21, 1832 that Brugier

...made several mason's works on the plantation of said Moussier... plff. [plaintiff] has prolonged the sugar house fifteen feet by thirty-nine-- [deponent] does not exactly recollect the height of said work, thinks it is twelve feet or thereabouts. The front wall was made up to the top. [Deponent says] that plff. has covered the mill and sugar house in what is termed in french 'terrasse', as also one to cover the fire-man's cabin and the steam engine-- that he has put up one small set of kettles to prepare and cook the negroe's victuals-- & made some repairs to the fire engine-- made a oven & a chimney for the blacksmith's shop; as also all the works of the drainage house, covered in terrasse, with a facing or front to said draining house & has also put up one set of boilers... [Succession #46, Jefferson Parish Probate Records, JPCH, *sic* throughout]

The meaning of the French term *terrasse* is obscure. These English-language documents use the word instead of an English equivalent, but none of the variety of meanings of *terrasse* in modern French are fully appropriate for the use of the word here. In this example of Louisiana usage, *terrasse* may mean an arcade-like structure with masonry columns supporting the roof, without complete walls on all sides. The roofs may have been flat, since this is a usage of *terrasse* in modern French. Unfortunately, further testimony about Brugier's work on the island does not improve our understanding of what the structures were like. Antoine Marcour, who was employed as a carpenter on Moussier's plantation, also made a deposition concerning the work done by Brugier. Marcour said he "saw plff prolong the sugar house 15 feet and covered in terrasse," erect the mill, steam engine, and fire man's cabin, make an oven, a chimney for the blacksmith's shop, repair the steam engine, and erect "a set of kettles to prepare the hands meals." Marcour stated that Brugier made "the whole of the draining-house, the front of said draining house & the covering of the same in 'terrasse'-- also the set of boilers for that sugar mill" (Succession #46, Jefferson Parish Probate Records, JPCH).

Other deponents testified that Brugier's rate of charge for bricklaying was at reasonable market level, and that Brugier procured a reasonable number of bricks for the work performed. Lucien Guillaume Hiligsberg stated that Moussier owed him \$90 for bricks used at Grande Terre. On September 28, 1830, Hiligsberg sold Moussier 5,000 ordinary bricks at \$10 per 100 and 2,000 paving bricks at \$20 per 100. Other artisans were hired by Moussier for work on the Grande Terre plantation and were left unpaid because of Moussier's death. Among them were carpenters Pepe Barthelemy and Joseph Femy, who performed unspecified work on Grande Terre between 1829 and Moussier's death in 1831. Unfortunately for these workmen, they were considered "ordinary creditors" and were not compensated from the succession sale of Moussier's real estate, moveables, and stock shares, which netted only \$69,998.46 (Succession #46, Jefferson Parish Probate Records, JPCH).

Charles Derbigny was named administrator of the Moussier estate by the Probate Court soon after Moussier's death. Derbigny waited to sell the plantation, wishing to benefit the estate by the sugar harvest of 1831. However, in a petition filed in the Probate Court, Derbigny stated that in August 1831, a hurricane destroyed the "crop, fences, part of the stuck

Table 5. Statement of work performed by brickmason Philippe Brugier on the Moussier plantation, Grande Terre, in October 1830.

Two extensions each measuring	18	toises
a wall measuring	25 $\frac{1}{6}$	toises
a <i>terrasse</i> [foundation] measuring	68 $\frac{8}{9}$	toises
For the mill a <i>terrasse</i> measuring	43 $\frac{1}{3}$	toises
For the fireman [<i>chauffeur</i>] a <i>terrasse</i> measuring	8 $\frac{4}{9}$	toises
For the steam engine a <i>terrasse</i> measuring	9 $\frac{3}{4}$	toises

Total	<u>173 $\frac{21}{36}$</u>	toises
-------	---------------------------------------	--------

At the rate of two and one half piastres per toise	\$433.96
For having mounted a small apparatus	15.00
For having repaired a steam engine	10.00
For having made an oven for baking bread	10.00
For having made a forge and a chimney	8.00
	<u>\$476.96</u>

Received	<u>180.00</u>
	\$296.96

Table 6. Statement of work performed by brickmason Philippe Brugier on the Moussier Plantation, Grande Terre, in December 1830.

For the purgery

Two facades each measuring $22 \frac{1}{3}$ together	44 $\frac{2}{3}$ toises
<i>a terrasse</i>	52 $\frac{8}{9}$
	114 $\frac{8}{9}$

At the rate of two and one-half piastres per toise	\$287.22
For having mounted a large apparatus	200.00
	<hr/> \$487.22

[sic] and some small buildings on said plantation." The 1831 hurricane was one of the greatest of the nineteenth century, referred to as the "Barbados to Louisiana Hurricane." It produced a storm surge of 2 m at Grand Isle (Williams et al. 1992:98). After the hurricane, Derbigny proposed selling the plantation, buildings, steam engine, cattle, horses, farming utensils, house furniture, two flatboats, one pirogue, and 50 of the slaves. On November 17, the court agreed that a public sale of the Grande Terre property should be held on Monday, December 19, 1831 (Succession #46, Jefferson Parish Probate Records, JPCH).

On December 19, 1831, Grande Terre plantation and 58 slaves were purchased by the Consolidated Association of the Planters of Louisiana, one of Moussier's creditors, for \$61,500. Widow Moussier received 1200 superficial yards "on the point of the Island of 'Grande Terre,' near the pass" for a consideration of \$1200. Six slaves were purchased from the succession by Moussier family members. These were the slaves Mary, aged 20; Liza (alias Nancy or Saiza), aged 30, and her child Harrison; Lucy, aged 12 (or 13); Franky, aged 12; and Blind Daniel, aged 40 (or 55) years, who was purchased by Gustave Moussier for \$25. Liza and Mary were domestics at the Moussier's New Orleans townhouse. Jenny, a six year-old orphan, was purchased at the succession sale by Grande Terre overseer Louis Wagner (Succession #46, Jefferson Parish Probate Records, JPCH). The list of slaves sold in the succession sale, differing slightly from the list in the succession inventory, is presented in Table 7.

The conveyance history of Grand Terre following Moussier's succession is not entirely clear. The Consolidated Association of Planters of Louisiana (or *L'Association Consolidée de Cultivateurs de la Louisiane*) sold the Grande Terre plantation and 40 of its slaves to Etienne DeGruy on December 12, 1832, for \$70,524 (COB 4 folio 53, JPCH). Prior to September 1833, A. Foucher sold a portion of the land he owned on the western tip of Grand Terre to the United States (Greene 1982:254). Presumably, Foucher had acquired the land reserved by Widow Moussier from the sale of Grande Terre Plantation. One year later, on September 20, 1834, DeGruy sold the plantation and 38 slaves back to the association for 50,000 *piastres* (dollars), a sizable loss (COB 4 Folio 53, JPCH). The conveyance listed a steam engine, nine horses, 13 mules, 10 pair of cattle, about 100 head of horned cattle, agricultural implements, some house furniture, two flatboats, and one pirogue. The 40 slaves conveyed are listed in Table 8. Obviously, the decline in numbers of slaves at Grand Terre represents the result of either mortality or the sale of slaves off the island. On January 10, 1834, Etienne DeGruy deeded 126.16 acres on the western end of Grand Terre Island to the United States for \$10,000. Jurisdiction over the site was ceded to the United States by act of the Louisiana Legislature dated March 10, 1834, and by deed signed by the Governor on May 14, 1834 (COB 3 folio 279, JPCH; Casey 1983:107), completing the accession of the Fort Livingston site by the United States. The details of how Foucher's remaining acreage was acquired by the United States or DeGruy, or before him, the Consolidated Association of Planters of Louisiana, could not be determined from conveyance records. Construction of military facilities at Fort Livingston began in 1834, and is discussed in detail below.

On March 12, 1835, the Consolidated Association of Planters of Louisiana sold "Grande Terre," minus the U.S. military reservation of 132 superficial arpents on the western end, to the partnership of Alexander Gordon, Edmond Forstall, Felix Jean Forstall, Placide Forstall, and Louis Alexander Forstall (COB 4 folio 230, JPCH). The conveyance stated that the principal improvement was a brick sugar house, "covered in flat tiles," and that the slaves on the plantation were included in the sale. The conveyance stated that 40 slaves were conveyed with the plantation, but only 37 individuals were inventoried. The men, women, and children listed are largely the same individuals as in 1834 (Table 8), with a few exceptions. A 47-year old man named Cascesienne and 9-year-old Relf and infant Paul were deleted, a 40-year old man named Gouverneur was added, as were two children, Suzanne and Maynenee.

Table 7. Slaves from the Grande Terre plantation purchased by the Consolidated Association of the Planters of Louisiana, December 19, 1831 (from Succession #46, Jefferson Parish Probate Records, JPCH).

Charles	Marie and
Ben	Juliet, her daughter
Nelson	Louise alias Louisa
Relf	Beslinda and her three children,
Billy Sinton alias Serton	Victoire,
Robert alias Bob	Fanny,
Jack Harding	& Edmond
Samlett	Sally
Bolen alias Boling	Scilly and
George	Delphine, her daughter
Sim	Sarah and
Henry	William, her child
Steven	Betsey Ben and her four children,
Joshua	Relf,
Bartlett	Suzanne,
Jack Hall alias Comb	Vincent,
John	& Caroline
Sam Brown	Lucy Good alias Goose and her two children,
Billy Reed	Christophe,
Wyer alias Wyatt	& Hetty
Harry	Phoebe and
Sam alias Governor	Rachel, her child
Pleasant	Aggy and her child
Peter	Polly
Morris	Betsey Relf and her two children,
Volsey	Zacharie,
Moses	& Medard
Joe	Esther and
	Silly, her child

Table 8. Slaves conveyed with sale of Grande Terre plantation by Etienne DeGruy to the Consolidated Association of the Planters of Louisiana, September 20, 1834 (from COB 4 folio 53, JPCH).

Billy negro	35 years	Marie	40
Valsey	28	Beslinda	36
Jack Harding	30	Louise	14
Nelson	28	Betsey Hardy	38
Cascesienne [?]	47	Silly	20
Sam	47	Hester	40
Jack Hall	57	Jily	--
Stephen	44	Agis	28
Bolen	27	Sarah	24
Henry	34	Sally	40
Samlet	40	Plaisance	18
Bollen	54	Henrietta	some months
Peter	20	Juliette	8
Joe	11	Victoire	8
Relf	9	Fanny	7
Meder	5	Rachell	6
Ben	5	Jeanne	some months
Edmond	5	Nelly	2
Christophe	3		
Paul	some months		

The naturalist and artist John James Audubon visited Grand Terre briefly in early April 1837. He described his trip to the island in a letter, dated April 6, to the Reverend John Bachman of Charleston, South Carolina:

Island of Barataria, Grand Terre, April 6th 1837
U.S. Revenue Cutter Campbell

My Dear Bachman--

I wrote a few lines to you from this place by a schooner bound for New Orleans, but as winds & *Mail carriers* are not always to be depended on, I will try to have this ready for a Gentleman going from here to New Orleans by the Bayous 105 miles, and who promises to have it put in the Post Office. We were detained a few miles below New Orleans for the want of sailors, until raising the wages to 40 Dolls we procured a few crew and some stout fellows, after which we sailed down the great stream to its Southwest pass or entrance.-- The next morning we sailed (very foolishly) to the Northeast Pass, and sent an officer in a boat in search of a *Capn Taylor*. also of the Revenue Service, to whom the Collector at New Orleans had sent orders to Join us, and to assist us as a Pilot.-- That day was lost.-- The next morning we went shooting and Killed 4 *Marsh Terns* and some other birds-- We had put *Mrs Coste* on shore at a Fishers house to await the return of her husband, and the next morning early we sailed on our Expedition. The weather was fair and the sea smooth until we approached the Barr at *this* place, we however crossed it guided by Mr. Taylor whom we towed, on board of his *Crusader*, a small schooner of about 8 tons, acting as a tender on the Campbell. We anchored safely under the lee of Barataria Island and have been here ever since-- Shooting & fishing at a proper rate.-- Johnny & I shot 4 White Pelicans-- Harris and the two latters a great number of different Tringas, Terns, Gulls &c-- and so we have passed our time, at potting species, their habits, and skinning and placing specimens in Rum.-- One cask is already filled.-- We are all well... -- Not a bat on our island, and only raccoons, otters, Wild cats, and a few Rabbits-- we have not seen anything more than tracts.-- Not a New Bird as yet.-- have Killed 5 *Tringa hyman-topus*. *Marsh Terns* abundant. *Cayenne* and *Common Do*. *Larus atricilla Do*-- White and Brown Pelicans-- and good variety of Ducks and the florida *Cormorant*-- few land Birds. Salt Water Marsh Hens and boat tailed Grackle breeding.-- but enough as I have noted every incident worth notice which you will read from the Journal...-- have this copied and forwarded to my dear wife and if you please have us "reported" in the papers. We have been very Kindly treated by a planter here who is a Partner of Mr Forestall of New Orleans, who gave me a few lines of Introduction.-- We have had fine vegetables, Milk & Corn Bread and *fresh Butter!*-- This Island is about 10 miles long but scarcely a mile broad-- it is low, and mostly marsh (hard however) with many ponds, Lagoons &c-- it possesses one sugar plantation and a few dilapidated Government buildings, began by *Jackson* but now abandoned and rotting.-- This was "*Lafitte's*" (The Pirate) Strong hold.-- The remains of his fortification, and the ground on which his houses stood are yet discernible.-- Some say that much money is deposited thereabouts-- I wish it was all in the Charleston Bank placed to *our credit!*-- The Island is flat, and in 1830 was overflowed by the waves of the Gulph impelled by a Hurricane to the depth of 4 feet above the highest ground, and Castle &c was sent adrift toward the Main distant some 12 or 15 Miles.-- The soil is good enough to produce Cotton or sugar.-- and the place healthy and pleasant; and yet I should not like to be imprisoned at large upon it the remainder of my Life-- It abounds with *Snakes* not however injurious excepting a very

small *ground* Rattle species.-- We have placed several in rum for Docr Holbrook, and *Crabs* for yourself!-- No Insects of note except *Musquitoes* and sand flies of which we could spare enough God knows... [from Corning 1930, vol. II:157-159, *sic* throughout]

Considerably more is known about the plantation on Grand Terre in the 1840s and 1850s than is the case during the ownership of Moussier or DeGruy. This is largely the result of excellent maps having been drawn of the island in 1841 (Figure 4) and 1853 (Figure 6). The 1841 map was drawn by J.G. Barnard and shows the "Old Canal" fully extended to the industrial complex of the plantation of "E. Forstall", while the "New Canal" bisects the plantation across the width of the island. At this time, the plantation was still owned by a partnership. Between 1835 and 1850, Manuel Julian de Lizardi acquired an undivided third interest in the property, evidently the portion acquired by Placide Forstall and/or Louis Alexander Forstall in 1835. On January 19, 1850, Lizardi sold an undivided one-third interest in the Grande Terre Plantation and its 86 slaves to Felix J. Forstall and Louis Edward Forstall (COB 18 folio 200, JPCH). On April 16, 1850, the remaining one third interest in Grande Terre plantation was purchased by Felix J. and Louis E. Forstall from the estate of Alexander Gordon, for the consideration of 23,333 *piastres* and 32 cents (COB B folio 63, JPCH). The improvements mentioned (but not inventoried) in this conveyance were a sugar house (*sucrierie*), a steam engine, "negro cabins", horses, cattle, mules, and agricultural implements. The conveyance included "85 or 86 slaves, more or less." The 85 actually listed are presented in Table 9.

Obviously, the slave force on Grande Terre had grown considerably in the 1830s and 1840s. A core of slaves present in 1831 remained almost two decades later. Twelve of the male slaves in 1850 can be identified as slaves on the 1831 inventory, and of these, 4 had been children in 1831. There is some confusion as to identities and names of the female slaves on the two lists, but perhaps as many as 12 had been on the island in 1831, and 5 of these had been 12 years of age or less. Unfortunately, documentation is lacking as to what became of the other slaves present on the island in 1831. Particularly mysterious is what happened to the other 10 children below the age of 12 in 1831, since less than one-half of them could be identified in 1850. Those slaves who disappeared from the documentary record between 1831 and 1850 may have been mortality victims, but some may have been sold away from the island. In April 1850, there were evidently 40 male slaves and 45 female slaves on Grand Terre. An anomalous entry on the 1850 list is the slave "Mason," 39 years of age, listed in the midst of the women and children, with the notation "and his three children." Perhaps Mason was a widower; it is also possible that the name should not be read as Mason and in fact this person was a woman. Mason has been considered a man for the purpose of these simple statistical analyses.

Figure 9 shows the age and sex distribution of slaves at Grande Terre Plantation between January and April 1850. The males at Grande Terre in 1850 had a mean age of 26 years, and the females a mean age of just over 24 years. The sexes were fairly evenly distributed in all age groups except for adults aged 21-34 years, where there were 11 women and seven men. The surplus of women aged 21 years and over suggests that in addition to expanding the slave force by the purchase of adult "prime field hands," the owners of Grande Terre may have sought to achieve a more even balance of men and women. Although the 1850 list is not entirely clear on this point, of the 16 adult women aged 21 to 44, seven of them had one or more child under 13 years of age. By 1850, the age and sex distribution of the Grande Terre slaves was closer to typical for the later antebellum Louisiana as a whole, with relatively large numbers of children and males and females in roughly equal numbers. On the larger

Table 9. Slaves on Grande Terre Island, January 19, 1850 (COB 18 folio 200, JPCH) and April 16, 1850 (COB B folio 63, JPCH). The names in brackets indicate different spellings of the names of individuals on the April 16, 1850 list; age discrepancies are also entered in brackets.

Peter Conducteur	55 [35]	Suzannah	26	
Plaisance	34	Bessy Ben	36	
Edmond	19	Fihe	80	
Henry Yellow	32	Rachel	19	
Medor [Médu]	24	Mason	39	and his [sic] three children
Ben Big	32	Louisa	8	
Timrod	39	Jim	6	
William	50	Margaret	4	
Walere	48	Louisa	30	and her five children
George Big	42	Alfred	10	
Henry Black	48	Marie	7	
Bolein	48	Lucy	6	
Bola	70	Juliette	3	
Samlet	50	Robert	1	
Christoff	19	Linda	52	
Henry Black	44	Fanny Black	30	
Stephen	60	Fanny Yellow	22	
George Little	16	Victoire	21	and her son
Washington	36	Auguste	3	
Walsy	42	Susanne	32	and her four children
Adam	34	Noel	7	
Ralph	27	Lewis	6	
Alfred	7 [11]	Violet	5	
Ben Little	24	Hawkins	3	
Walsy Little	11	Leode	44	and her two children
Randolph	12	John	4	
William Little	11	Joe	3	
Sue	27	Jane	18	
Smith	5	Nancy	39	
Phene	15	Juliette	25	and her three children
Marie	62	Bob	6	
Betsy Kife	52	Hannah	5	
Saley [?]	7	Victorine	3	
Cimbrey	34	Sarah	42	and her daughter
Hester	54	Clothilde or Cinthy	8	
Lilly	20	Marianne	16	
Betsey Lewis	39	Estelle	9	
Beckey	49	Eliza	7	
Mary	49	Adeline	9	
Lucy	32			
Patty	30			with her five children
Nash	9			
Harriet	7			
Amelie	7			
Théréza	3			
Mary Ann	1			

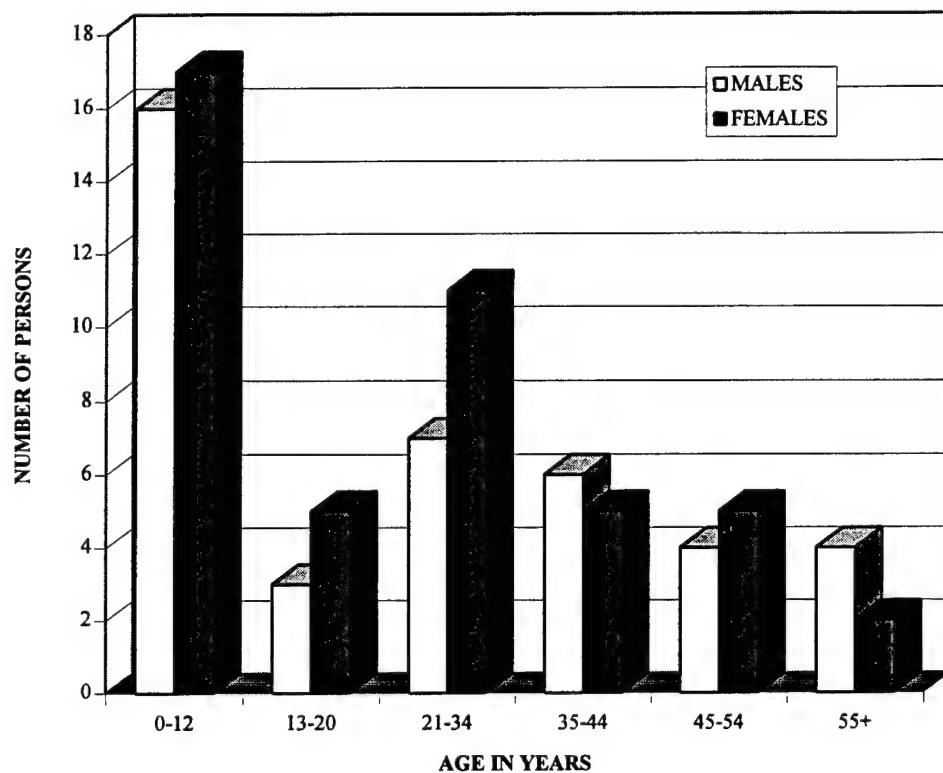


Figure 9. Age and sex distribution of slaves at Grande Terre Plantation, January-April 1850 (from Succession #46, Jefferson Parish Probate Records, JPCH).

Louisiana sugar plantations, slave marital and family life attained a high level of stability in the later antebellum period, as plantation populations became more sexually balanced and less often subjected to the upheaval of sale and transfer to other properties (Yakubik et al. 1994, vol. I:5-15).

The New Orleans Custom House contains records of vessels associated with the plantations on Grand Terre, particularly under the ownership of the Forstalls. Table 10 is a compilation of vessels associated with Grand Terre, and indicates that the vessels calling on Grand Terre were larger and of deeper draft than the vessels associated with Grand Isle (Saltus and Pearson 1990:14). This is consistent with the superior harbor on the bay side of Grand Terre. Thirty-six percent of the vessels associated with Grand Terre were steamboats, which likely carried a major share of the sugar produced on the Grande Terre Plantation. The steamboats tended to be substantially longer and wider than the sailing vessels associated with Grand Terre, but of much shallower draft (Table 10). Table 11 is a list of the names and dimensions of vessels associated with Grand Terre, and Table 12 is a list of steam boats specifically associated with the Forstall plantation.

The 1853 U.S. Coast Survey map of Grand Terre (Figure 6) clearly depicts the layout of the Forstall plantation. It does not, however, indicate a house at the former location of Laffite's settlement, corresponding to the two-storied, galleried house depicted in the *Daily Delta* in 1854 (*The New Orleans Daily Delta* 1854:1). The number of slave cabins shown is probably fifteen, possibly with the overseer's house at the inland side or head of the "street." This was a frequent location of overseer's or driver's cabins, facilitating supervision of the quarters. However, the overseer's house may have been located elsewhere, perhaps nearer the large, T-shaped sugar house shown on the map. The cabins appear to be staggered in their spacing, rather than with their doors facing each other across the street. A similar staggered arrangement of cabins has been observed at other antebellum Louisiana sugar plantations (Yakubik et al. 1994, vol. I:5-27). If this Coast survey map is indeed accurate in detail, it appears that the slave cabin yards may have been individually fenced. Studies of plantation landscapes have concluded that fully fenced slave cabin yards were common in Louisiana during the antebellum period, allowing slaves to keep small livestock, poultry, and grow vegetable gardens in proximity to their cabins (Yakubik et al. 1994, vol. I:5-1 to 5-20).

Scholars have concurred that, on average, slave cabins held one family of five or six persons. This may have been true, but the square footage of cabin floor space that was provided varied by a factor of at least one hundred percent among plantations. A cabin 12 feet on a side (144 square feet) was on the bottom end of the size spectrum, 400 square feet was considered desirable by antebellum southern commentators, and some very few planters provided even larger cabins. There is enough housing depicted on the 1853 map for there to have been 5 or 6 persons per cabin at Grand Terre, but the actual size of the cabins cannot be inferred. The standards of slave housing varied so widely among plantations that generalizations are difficult to make, although usually housing conditions on Louisiana sugar plantations were somewhat better than on the cotton plantations of northern Louisiana and in many other parts of the southern states (Yakubik et al. 1994, vol. I:5-12).

The Forstall's Grande Terre plantation appears in P.A. Champomier's Statement of the Sugar Crop Made in Louisiana for only five years in the antebellum period (Table 13). The crops of 1850 through 1854 show a high yield of 314 hogsheads of sugar in 1850 and a low of 150 hogsheads in 1852. It seems that the extreme southern latitude of Grand Terre and the moderating influence of the Gulf may have allowed the Forstalls to produce a reasonable (but not extremely large) crop in what were otherwise not ideal cane-growing conditions. In Louisiana, cane grows best in rich alluvial soils like the silty loams of the natural levees of the

Table 10. Vessels enrolled at the New Orleans Custom House associated with Grand Terre, 1804-1870 (from Saltus & Pearson 1990:16).

Vessel Type	Number of vessels	Construction location	Length	Width	Depth
Sloop	2	North Atlantic	50.4' - 57'	16.3' - 20'	5.3' - 5'
Schooner	7	Western River	32	13.8'	4'
Schooner	6	North Atlantic	45' - 71' (avg. 60.3')	15.1' - 22.5' (avg. 17.2')	4.3' - 7.6' (avg. 6.4')
Bark	2	North Atlantic	94.5' - 98.0'	23.9' - 26.3'	12' - 13'
Brig	7	North Atlantic	70.4' - 117.1' (avg. 85.4')	21.0' - 26.1' (avg. 20.7')	8.7' - 12.4' (avg. 10.0)
Ship	4	North Atlantic	81.3' - 110.0' (avg. 93.2')	23.3' - 30.0' (avg. 26.5')	9.4' - 13.3' (avg. 12.6')
Steamboat	8	Eastern River (after 1823)	96.5' - 177.5' (avg. 123.7')	11.3' - 25.3' (avg. 20.9')	3.9' - 13.0' (avg. 8.1')
Steamboat	8	Western River (after 1837)	76.4' - 172.0' (avg. 123.5')	18.3' - 28.0' (avg. 19.9')	4.1' - 8.0' (avg. 5.9')

Table 11. Vessels associated with Grand Terre during ownership of J.B. Moussier and Alexander Gordon (from Saltus;n.d.).

Vessel Name	Vessel Type	Place Built	Date Built	Tons Burden	Length	Width	Depth
--	brig	Virginia	1815	240	89'	24.9'	12.4'
<i>Alexander Gordon</i>	steamboat	Cincinnati	1837	65	76.4'	17.3'	5.4'
<i>Aurora</i>	schooner	Kentucky	1831	63	59.3'	19.1'	6.5'
<i>Bonita</i>	steamboat	Cincinnati	1832	140	120.1'	19.3'	6.3'
<i>Delta</i>	steamboat	Cincinnati	1834	100	109.25'	18.3'	5.2'
<i>Levant</i>	steamboat	Cincinnati	1835	270	145'	25'	8'
<i>Audubon</i>	brig	Minnesota	1834	130	80'	21'	8.75'
<i>Mary</i>	schooner	North Carolina	--	25	45'	15.1'	4.3'
<i>Cuba</i>	steamboat	Maryland	1837	563	177.5'	25.25'	13'
<i>Mary Ann</i>	brig	Connecticut	1827	183	78'	23.6'	11.5'
<i>Walker</i>	steamboat	Pennsylvania	1839	195	111.75'	21.5'	6.5'
<i>William S. Turner</i>	schooner	North Carolina	1829	78	65.4'	20'	6.9'
<i>Aid</i>	steamboat	Cincinnati	1843	138	124'	28'	4.14'
<i>Betsy</i>	schooner	Florida	1839	29	32'	18'	4'
<i>Bolivar</i>	steamboat	New York, NY	1826	153	96.5'	23.6'	7.67'
<i>Callao</i>	schooner	Connecticut	1833	98	71'	22.5'	6.6'
<i>Clipper</i>	steamboat	Indiana	1840	299	172'	27'	6.75'
<i>Ivanhoe</i>	brig	Massachusetts	1828	193	88.75'	22'	11'
<i>Phenix</i>	steamboat	Algiers, LA	1837	420	144.9'	21.4'	10.1'
<i>Rebecca</i>	steamboat	New York	--	60	108.5'	11.3'	3.9'
<i>Robert Morris</i>	bark	Pennsylvania	1829	241	94.5'	23.9'	12'
<i>Southerner</i>	steamboat	South Carolina	1839	179	120'	20.75'	7.6'
<i>Union</i>	bark	Minnesota	1827	289	98'	26.25'	13.1'
<i>Vistula</i>	ship	Minnesota	1837	366	117.1'	26.1'	--
<i>Eliza S. Leeper</i>	schooner	New Jersey	1846	66	69.3'	20.7'	5.8'

Table 12. Steamboats associated with Grande Terre Plantation (from Saltus, n.d.).

Vessel Name	Place Built	Date Built	Tons Burden	Depth
<i>Walker</i>	Pennsylvania	1839	195	6.5'
<i>Aid</i>	Cincinnati	1834	138	4.14'
<i>Bolivar</i>	New York, NY	1826	153	7.67'
<i>Clipper</i>	Indiana	1840	299	6.75
<i>Phenix</i>	Louisiana	1837	420	10.1'
<i>Rebecca</i>	New York	--	60	3.9'
<i>Southerner</i>	South Carolina	1839	179	7.6'
<i>Alexander Gordon</i>	Cincinnati	1837	65	5.4'
<i>Bonita</i>	Cincinnati	1832	140	6.3'
<i>Delta</i>	Cincinnati	1834	100	5.2'
<i>Levant</i>	Cincinnati	1835	270	8'
<i>Cuba</i>	Maryland	1837	563	13'

Table 13. Sugar Production at Grande Terre Plantation, 1850-1854 (from Champomier 1850-1854).

Season Ending	Owner / Manager	Sugar in Hogsheads
1850	Forstall Brothers	314
1851	F.G. & L.E. Forstall	203
1852	F.G. & L.E. Forstall	150
1853	F.G. & L.E. Forstall	160
1854	F.G. & L.E. Forstall	210

Mississippi. The mucky soil of Grand Terre was certainly not ideal, and frequent inundation of the island with salt water by hurricanes also would not have improved cane productivity. It is not known that the Forstalls persevered with cane cultivation after 1854, although an article in the *St. Nicholas Magazine* in 1888 suggested that cane growing had continued into the post-Civil War period (Kendall 1940:468). There are numerous possibilities as to why cane cultivation is not documented at Grande Terre in the late antebellum period, but unfortunately, events and conditions on the plantation during the Civil War and emancipation periods are largely unknown.

After the Civil War, Louis E. Forstall and Felix J. Forstall were unable to meet mortgage terms on their plantation. Following the death of Felix Forstall, the plantation was seized and sold at a Sheriff's sale on December 14, 1870, once again to the Consolidated Association of Planters of Louisiana. The sugar house had evidently survived the Civil War and was included in the sale, which was made for the price of a mere \$1,000 (COB N folio 290, JPCH). There is no indication that the Association made any attempt to conduct agriculture on the island. During this period, a major hurricane struck, in September 1877. This storm caused considerable shoreline changes along the Louisiana Gulf coast (Williams et al. 1992:98). The assets of the Consolidated Association of the Planters of Louisiana were liquidated in 1879, and in a sale dated December 30, 1878, the "Grandeterre" plantation was sold to Joseph [José] Llulla of New Orleans for \$2,000 (COB O folio 156, JPCH).

José "Pepe" Llulla had become a legendary New Orleanian in his own lifetime. He was the most celebrated duellist of antebellum New Orleans; there were fantastic stories of his exploits with sword and gun under the old *code duello* that governed affairs of honor among "gentlemen" in the nineteenth century. Llulla was born near Port Mahon, in the Balearic Islands, in 1815. He was an expert shot with all manner of firearms and mastered fencing with épée, sabre, and broadsword. He maintained a *Salle D'Armes* in New Orleans during the antebellum golden age of such establishments. He was evidently known not as a teacher, however, but as a duellist. Llulla himself may have had as many as 30 *affaires d'honneur*, but his reputation as a swordsman and pistol shot caused the great majority of them to be settled before coming to blows. However, he was a second in many other duels. His popularity was very high, particularly among New Orleans' hispanic community. Llulla engaged in a number of business activities, beginning with a barroom near Jackson barracks and eventually owning the Louisa Street cemetery, where he served as sexton (Kendall 1940:445-470). Many of the stories told about Llulla are probably exaggerated or apocryphal, but there is little doubt that he was a man of highly formidable accomplishments, and not to be trifled with. Legend, whether true or not, says that Llulla retired to Grand Terre at least partly to avoid the notoriety of being an "unbeatable" duellist and the attentions of aggressive young men. The *St. Nicholas Magazine* of February 1888 contained an anecdote of Llulla's years on Grand Terre:

...on an island called Grand Terre... Only one man stays in the fort [Fort Livingston], an old sergeant, who looks after the government property. The other persons living on Grand Terre are the lighthouse keeper and a Spanish gentleman named Pepe Llulla, who used to make sugar there till a tidal wave ruined his plantation, and who now raises cattle for a living. This Spaniard used to be a famous duellist in his younger days...

A good story is told about this combative old gentleman. He had some difficulty with a former lighthouse keeper, who used to be his friend. A mutual acquaintance said: "You ought to be on good terms with each other. You ought to meet and arrange your little difficulty to your mutual satisfaction. Now, let me see Douglas and tell him you will meet him."

"Very well," replied the Spaniard, with his strong accent. "You may see Mr. Douglas and say to him that I am ready to settle our little difficulty. I will be on the beach tomorrow morning with my shotgun. Let him be there with his shotgun, and we will settle everything to his entire satisfaction."

Pepe Llulla was on hand at the hour he appointed, but the lighthouse keeper did not appear, and their quarrel has yet to be adjusted [quoted in Kendall 1940:468].

An illustration of Pepe Llulla on Grand Terre, conveying something of his personality, was published in the *St. Nicholas Magazine* in 1888 (Figure 10). It is not documented where he had been residing on the island, but possibly he lived in the Forstall plantation overseer's house. Llulla left Grand Terre sometime between 1886 and 1888. In 1886, a *Plat Representing a Portion of Grande Terre Island* was drawn, showing the major canals on the island as of that date, the U.S. reservation, and several oyster bed leases along the northern side of the island (Figure 5). In 1888 Llulla purchased a large tract on Chênière Caminada, but evidently did not reside there. On March 6, 1888, Llulla died at the New Orleans home of his daughter, Louisa Suarez Meranda. He was buried in his own Louisa Street cemetery (Kendall 1940:463, 470).

At the death of Pepe Llulla, the Grande Terre plantation was inherited by his daughter, Louisa Suarez Meranda. On June 13, 1893, Mrs. Suarez and her husband, Manuel Suarez Meranda, sold Grand Terre (minus the U.S. military reservation) to 25 New Orleans businessmen, each of whom obtained an undivided 1/25 interest in the island (COB W folio 120, JPCH). Considerable resort development had occurred on Grand Isle by the time of Llulla's death, and these businessmen hoped to turn Grand Terre into a tourist destination. They purchased the island for \$2,500, expecting the extension of a rail line to the island to create a "small bonanza" (Williams et al. 1992:14). However, the rail line never materialized, and with Fort Livingston derelict, the island slipped into obscurity. After Pepe Llulla departed, the only regular residents of Grand Terre were the single keeper of Fort Livingston (who left in 1889) and the lighthouse operator. Towards the end of Pepe Llulla's residency, writer Lafcadio Hearn visited Grand Terre. In an impressionistic passage in his novel *Chita*, Hearn conveyed some sense of the desolation and beauty of vacant Grand Terre:

Beyond the sea marshes a curious archipelago lies. If you travel by steamer to the sea-islands today, you are tolerably certain to enter the Gulf by Grande Pass-- skirting Grande Terre, the most familiar island of all, not so much because of its proximity as because of its great crumbling fort and its graceful pharos: the stationary White-Light of Barataria. Otherwise the place is bleakly uninteresting: a wilderness of wind-swept grasses and sinewy weeds waving away from a thin beach ever speckled with drift and decaying things, -- worm-riddled timbers, dead porpoises. Eastward the russet level is broken by the columnar silhouette of the light house, and again, beyond it, by some puny scrub timber, above which rises the angular ruddy mass of the old brick fort, whose ditches swarm with crabs, and whose sluiceways are half choked by obsolete cannon shot, now thickly covered with incrustation of oyster shells... Around all the gray circling of a shark-haunted sea...

Sometimes of autumn evenings there, when the hollow of heaven flames like the interior of a chalice, and waves and clouds are flying in one wild rout of broken gold,-- you may see the tawny grasses all covered with something like husks,-- wheat-colored husks,-- large, flat, and disposed evenly along the lee-side of each swaying stalk, so as to present only their edges to the wind. But, if you approach, those pale husks all break open to display strange splendors of scarlet



Figure 10. Pepe Llulla on Grande Terre, drawn from life by S.W. Kemble, from the *St. Nicholas Magazine*, March 1888 (from Evans et al. 1979:85).

and seal-brown, with arabesque mottlings in white and black: they change into wondrous living blossoms, which detach themselves before your eyes and rise in air, and flutter away by thousands to settle down further off, and turn into wheat-colored husks once more... a whirling flower drift of sleepy butterflies [Hearn 1969:9-11]!

Fort Livingston 1834-1923

Although a permanent work at Grand Terre was proposed soon after the War of 1812, fort construction was put into the third priority of construction by the War Department. This may have been because the shallowness of the bar at Grand Pass prevented large warships from entering Barataria Bay (Casey 1983:107). An appropriation for collection of building materials was made as early as 1822, and a \$25,000 appropriation was made for materials in 1833. It was not until 1834 that preparations on the site were begun, and an appropriation of \$56,000 was made. In this year, temporary quarters were erected for the engineer and superintendant and work was begun on a hospital building, but in July, preparations were suspended for lack of an engineering officer to direct work. On January 1, 1835, William Hull was hired by Captain William Chase, senior engineering officer at New Orleans, to superintend construction of unspecified buildings at Grand Terre. Work at the site seems to have lapsed for some years, although in 1839, Congress appropriated \$150,000 for fort construction on Grand Terre (Greene 1982:255; Casey 1983: 107-108).

Construction on Fort Livingston began in earnest in 1840, when Captain John G. Barnard supervised the work of raising quarters for the laborers, workshops, and stables. The design of the fort prepared by Patterson and Bernard in 1817-1818 had been a crescent-shaped structure, but the design chosen for actual construction was quadrilateral, with the principal gun batteries in arched, single-tiered casemates on the Gulf side and a moat paralleling its northeast and northwest faces. Quarters, storerooms, and guardhouses were to be in casemates in the northeast, northwest, and southwest faces. The fort walls were to be constructed of tabby (shells mixed with cement) and faced with brick. Above the casemates, guns *en barbette* were to be mounted on the ramparts (Greene 1982:255-256). An overall plan of Fort Livingston is presented in Figure 11.

By September 30, 1841, only part of the foundation and main scarp wall had been completed due to a shortage of funding and building supplies. Twelve months later, the foundation was mostly complete, the scarp raised six feet all around, the counterscarp and glacis underway, a large amount of earth accumulated for the rampart, and a wharf built. In 1842, a 600-yard railway was laid for transporting bricks, shell, and cement from the wharf to the construction site. Additional workmens' accommodations were built and a mortar mill was constructed. Alterations were made in the design of the fort to allow the use of tabby wherever possible, with brick used primarily for facing and arches, resulting in a considerable savings. Some of the brick and all of the shell used in construction was obtained locally (Greene 1982:256).

As early as 1842, it became necessary to slow the pace of work on the fortification because of concern over subsidence. Captain Barnard noted that "underneath the piers of the casemates I employed both the rammer and the passage of carts to consolidate the earth & even then have not considered it prudent to build on them until after a years exposure to rains and the influence of time" (quoted in Greene 1982:257). The report of the chief engineer for 1843 stated that 1,721 cubic yards of brick work, 1,421 cubic yards of concrete, and 28,239 cubic yards of earthwork were in place to date (Casey 1983:108).

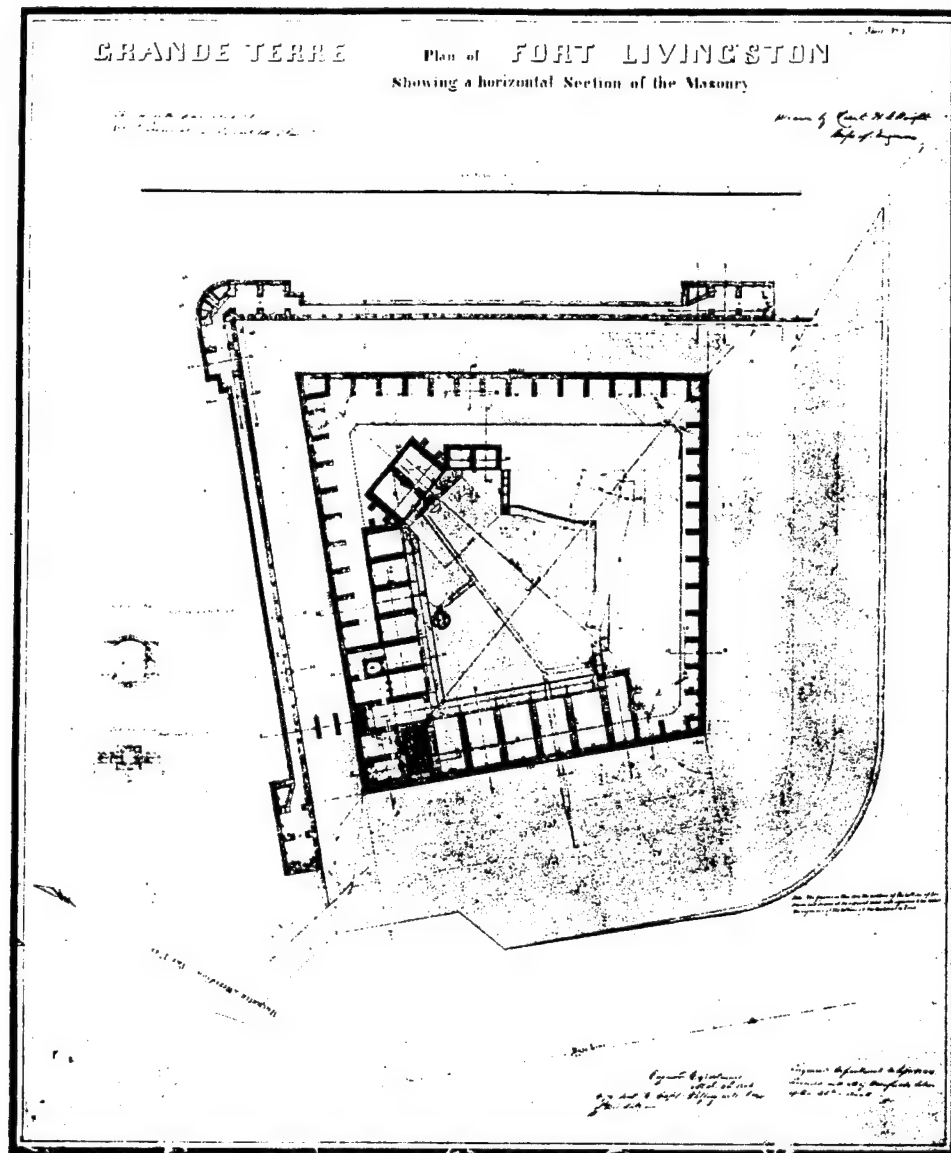


Figure 11. *Plan of Fort Livingston, 1844.* The fort is shown as constructed (from Williams et al. 1992:15).

To forestall the possibility of any development on Grand Terre that would hinder the strategic or tactical utility of the fort, on March 25, 1844, the western end of Grand Terre was declared a military reservation (Greene 1982:257). Between 1840 and 1846, \$275,000 had been appropriated for work on the fort, and by the end of 1847, the glacis had been completed and sodded, the exterior ditch had been finished, and concrete floors had been put in the counterscarp gallery and flank casemates. The earth required for parapets and terrepleins was being placed, the officers' quarters had been completed except for painting, and the parade ground had been leveled and drained (Casey 1983:108). By the following year, Barnard reported that the parade wall was finished, brick pavement laid in certain of the casemates, the ditch graded, and a tile drain placed in the ditch. Leaks in the casemate roof caused by settlement had been repaired. The breast-high wall around the rampart was completed and the remaining earth required for the parapet, terreplein, parade, and glacis was put in place. More earth was added to the northwest and southwest walls to equalize the subsidence, and the officer quarters were completed and painted. Barnard estimated that a considerable part of the remaining work-- laying the banquette, finishing the casemate interiors, grading grounds and earthen surfaces, adding covers to the cisterns, installing pumps, repairing frame buildings, erecting a permanent wharf, and repointing all the masonry, could be accomplished the following year, 1849. The fort would then be virtually complete except for the placement of gun platforms. Concerns over subsidence, however, delayed the placement of the armament. Another concern was erosion of the shoreline on the Gulf side of the fort. In 1853, shell and sandbag jetties were erected, but these proved inadequate to stem the erosion. Between 1840 and 1854, the Gulf beach in front of the fort receded 237 feet, and erosion continued unabated (Greene 1982:258-259). Matters were not improved by the effects of a hurricane in 1854 that did much damage to the works (Casey 1983:108).

Completion of Fort Livingston continued to be delayed. The engineering officer supervising work in the 1850s seems to have spent most of his time directing repairs of hurricane damage. In 1856, there were only four 6-pounder guns on hand at the fort; these were probably on naval or field carriages since none of the gun emplacements were finished. First Lieutenant of Engineers Walter H. Stevens reported in this year that he could, in the case of emergency, mount four guns per day in their emplacements at the cost of neglecting "details of construction necessary for permanency" (quoted in Greene 1982:259). Another hurricane in August 1856 inundated Grand Terre, and interestingly, the fort was used for shelter by "local residents":

On the 10th [of August, 1856] Mr. Wilkinson's family took refuge in the fort, ladies going waist deep in water to reach the glacis. On the 29th the surf broke in the parlor windows of the Quarters-- after which the family left in boats. Mr. W. was observing the breakwaters and told me the sea poured over them furiously-- that on the lee side, a hole was washed out 10 feet deep... [quoted in Greene 1982:259-260]

Mr. Robert Wilkinson maintained a summer home on Grand Terre during the antebellum period (DeBow 1847:308). It seems that the Forstall plantation slaves were not sheltered in the fort. In any event, the Army Engineers were at a loss as to how to alleviate the effects of storms on the fort, which were seriously delaying its completion. Lieutenant Stevens advised the construction of a strong dike or seawall. Before repairs could be completed and the fort finished, another hurricane struck in the spring of 1859. Stevens reported

It carried away some of the wooden pile jetty [built] in the pass, cut an opening into the outer ditch on the southeast front, and at the same time it washed into the ditch of the scarp, some front... From the old quarters (cottage house) to the S.E. angle of the fort... [the beach] has suffered considerably; about 20 feet of

the s. end of the glacis of N.E. face has [been] cut away... Another storm like the above may seriously endanger the fort... [quoted in Greene 1982:260]

Stevens' official report of November 8, 1859, stated that the work was unfinished and would require \$60,000 for completion (Casey 1983:108). To cap matters off, another storm on October 2, 1860, seriously eroded the shoreline at the fort, driving water as high as the loopholes on the counterscarp. Stevens reported in frustration, "it is useless to attempt any repairs... without a large sum of money" (quoted in Greene 1982:260).

The outbreak of the Civil War found Fort Livingston unfinished, subsiding, and damaged by storms. Louisiana militia may have seized the fort from the engineers and workmen present as early as January 1861, but according to U.S. military records, Lt. Stevens supervised repair work until March 2, 1861 (Greene 1982:261; Casey 1983:108). On May 1, the New Orleans *Daily Picayune* reported that Fort Livingston was manned by companies "G" and "H" of the 1st Regiment of Louisiana Regular Artillery (Casey 1983:108). In July 1861, General David Twiggs, in command of Confederate military Department No. 1, reported that two companies of Louisiana volunteers were at Fort Livingston (Davis et al. 1896, vol. LII:712). There is no evidence that any substantive work was performed in the fort until the autumn of 1861. In September 1861, troops of the Orleans Battalion of Artillery were sent to garrison Fort Livingston. General Lovell reported on December 5, 1861, to Confederate Secretary of War Judah P. Benjamin that 400 troops were at the fort (Casey 1983:108). General Lovell ordered that the flooded covered way of the fort be pumped out, and traverse circles and gun platforms installed. The Confederates installed fifteen pieces of ordnance in Fort Livingston; one 32-pounder rifled gun, one 8-inch Columbiad, seven 24-pounder smoothbores, four 12-pounders, and two howitzers (Greene 1982:261). On March 18, 1862, the *Daily Picayune* continued its policy of providing Union spies with convenient intelligence, informing its readers that Fort Livingston would be the headquarters of Col. Paul E. Theard's 23rd Louisiana Volunteer regiment, and that Companies A, B, C, and D were in the fort. These units were formerly part of the Orleans Battalion of Artillery (Casey 1983:108).

Despite these preparations by the Confederates, Fort Livingston was abandoned almost immediately after the collapse of the Confederate strategic position around New Orleans. Early on April 27, 1862, the remaining Confederate troops at Fort Livingston departed. Three Union mortar schooners were offshore (Scott 1886:461), one of them the *U.S.S. Kittletinny* (Casey 1983:109). At 7:30 AM on the 27th, Union naval officers on these vessels sighted a flag of truce raised at the fort (Greene 1982:261). Going ashore, the officers found the fort deserted. The fleeing Confederates had tried to set fire to the tents, ammunition, and provisions which could not be removed (Casey 1983:109). The small fires were easily extinguished by the landing parties. The United States flag was immediately raised over the fort (Greene 1982:261).

Only a "few local inhabitants" (Greene 1982:261) turned out to greet the Federals. It is not known if these locals were in fact slaves on the Forstall plantation or some other civilians. A local woman told the naval officers that the garrison had been composed mostly of "French and Italian" soldiers and that they were poorly clothed and had little food (Greene 1982:261). It is interesting to speculate that this unidentified local woman, possibly an "American" slave of the Forstalls, was describing French-speaking Creole or Acadian troops or troops recruited from the immigrant communities of New Orleans.

From April 1862 until the autumn of 1863, Fort Livingston was not garrisoned. In October 1863, units of the Sixteenth Maine Volunteer Infantry garrisoned the fort (Greene 1982:262). They were replaced before February 12, 1864, by 250 men of the 7th U.S. Colored Heavy Artillery (Scott 1891, vol. XXXIV:308). By June 9, 1864, the garrison had been reduced to six officers and about 95 men of Company "C" of the 7th Heavy Artillery, under

Lt. Thomas Newton (Scott 1891, vol. XXXIV:278, 610, 619). Units of this same regiment were stationed at Fort St. Jackson and Fort St. Philip. By August 26, 1864, the complement of cannon at Fort Livingston had been reduced to six guns (Davis et al. 1893, vol. XLI part II:872). It is tempting to speculate about the impact of the arrival of Federal troops, particularly African-American troops, on the previously isolated Forstall plantation, but there is no documentation available concerning events or conditions on the plantation in this period. It is probable that at least some of the slaves on the Forstall plantation left the island as soon as possible after the collapse of Confederate authority in the region.

In late summer or early autumn 1864, the troops of the 7th U.S. Colored Heavy Artillery were transferred from Fort Livingston and replaced by about 130 men and officers of Company "C" of the 10th U.S. Colored Heavy Artillery (Davis et al. 1893, vol. XLI Part IV:976). On November 23, 1864, Captain Albert Loring arrived at Fort Livingston to take command and was shocked to discover the situation there:

I found the command in very bad condition. The men came to me at once and told me they were not getting enough to eat on account of their rations being sold. Daniel Wilbur, Ordnance Sergeant, U.S.A., told me the same thing and I began immediately to investigate the matter. In doing this 2^d Lieutenants Wm. G. Walker and Leonard Hilton opposed me so much that I have seen fit to put both of them in arrest and shall file charges against them. I feel it to be my duty to report that the troops of this command have been grossly robbed of their rations for months past [quoted in Greene 1982:262].

Loring's report for December 1864 indicated that the troops were in good health, but stated that these soldiers had not been paid in eight months. The commanding officer that Loring replaced was arrested in New Orleans in November 1864 (Greene 1982:262).

For an unknown reason, the number of troops at Fort Livingston swelled to 540 men and the number of guns to 18 in January 1865 (Davis et al. 1896, vol. XLVII Part I:554). Captain Loring and the men of the 10th Heavy Artillery remained posted at Fort Livingston throughout 1865 and most of 1866. In September 1866, after two years of life on Grand Terre, the 10th U.S. Colored Heavy Artillery was transferred from Fort Livingston. The fort was left with a complement consisting of an ordnance sergeant and 15 men. These troops, too, were transferred in December 1866 and Fort Livingston was left in the care of the ordnance sergeant by himself (Greene 1982:262).

After the war, plans were made to complete work on Fort Livingston, and in 1868 an appropriation of \$24,500 was requested. By the following year, plans for completing Fort Livingston were shelved. However, in 1870 new plans were developed by the Board of Engineers for Fortifications to modify Fort Livingston to receive seven large rifled and smoothbore artillery pieces. An appropriation of \$38,000 was requested in 1870 for these modifications, but was denied. The same request the following year was also denied, and a mere \$2,500 was appropriated for maintenance of the work. In April 1872, the Civil War-era guns remaining at the Fort were dismounted. For the remainder of the 1870s, the Fort was neglected and continued to decay. Around 1873, a lighthouse was constructed on the Grand Pass side of the fort. Interestingly, a directive from the Treasury Department in 1874 reminded the lighthouse keeper that as of 1869 it became illegal for unofficial persons to take photographs of U.S. fortifications, and the keeper was to prevent anyone from taking photos of Fort Livingston from the lighthouse (Greene 1982:263).

An 1881 report of the Engineering Department mentioned the increased strategic importance of the fort because of the proposed Barataria Canal, that would connect Barataria Bay with Bayous Lafourche and Terrebonne and the Atchafalaya River. Nevertheless, General

W.T. Sherman recommended on October 16, 1882, that Fort Livingston be abandoned. A plan of Fort Livingston drawn up in April 1882 shows the armament of the fort consisting of one 24-pounder rifle and eight smoothbore guns (Casey 1983:109). Instead of the fort being abandoned, in 1884 maintenance work was undertaken at the work:

Grass, weeds, &c., were cut from inside the fort and on the ramparts. Some whitewashing was done, and a fence built to keep cattle off the slopes. Minor repairs were made to bridges; shot-beds were constructed; shots moved and piled; dismounted guns were raised and blocked; holes in the parade filled, &c. (quoted in Greene 1982:264).

Minor repairs were made to the ordnance sergeant's quarters in 1885, and the next year new plans were prepared for the construction of jetties to protect the shoreline from erosion. Despite these repair and maintenance efforts to the fort, the southern corner of Fort Livingston was lost to storm action and erosion by 1886 (Casey 1983:109). In September 1886, the military reservation on Grand Terre was relinquished to the Department of the Interior. The Quartermaster Department took over the fort in 1888 and removed all remaining useful public property. In 1889, the last ammunition in the fort was removed, the ordnance sergeant, Sgt. Gill, was transferred from the post, and the fort was abandoned (Greene 1982:258, 264).

In 1892, the War Department granted permission to the Treasury Department to erect a lighthouse on the fort, to replace the one on the seaward side of the structure. Five years later, in 1897, the second U.S. light was constructed at Grand Terre, on the north glaciis of the fort. Meanwhile, the hurricane of 1893 did great damage to the southern corner of the fort, evidently expanding damage that had already begun. Another major hurricane fully exposed the parade of the fort on the southern side in 1915. In 1923, Fort Livingston and its reservation were turned over to the State of Louisiana (Greene 1982:264-265).

Grand Terre Island in the Twentieth Century

Ownership of Grand Terre Island was never reconsolidated after the 1893 sale by Pepe Llulla's daughter, perhaps explaining why development has not occurred in the twentieth century. On July 30, 1902, twelve of the 1893 purchasers sold their interests in Grand Terre to the Gulf & Mississippi River Transportation Company for shares of stock (COB 22 folio 349, JPCH). Presumably, this Company was expected to build the railway to the island. However, there is no indication that the remaining 13 owners sold their shares to the Gulf & Mississippi River Transportation Co., and the railway was not built. Several of the 1893 purchasers had tax bills outstanding on their Grand Terre interests in 1902, and these were paid by James Wilkinson (COB 22 folios 352-357). The Gulf & Mississippi River Transportation Co. also did not keep current on their tax liability for Grand Terre. On October 29, 1927, the 12/25 share of the island owned by the Gulf & Mississippi River Transportation Co. was sold, at a tax sale, to John A. Saxton (COB folio 345, JPCH). Saxton acquired two more 1/25 interests in Grand Terre Island over the next few years, but on October 31, 1931, Saxton sold his 14/25 interest in the island to a vendee whose name is illegible in the Jefferson Parish conveyance office book (COB 112 folio 331, JPCH). Prior to February 1951, the Zodiac Corporation had acquired several 1/25 interests in Grand Terre, which it sold during the period from February to March 1951 in individual 1/25 undivided interests (COB 436 folio 242, JPCH). Division of interests through sale, donation, and succession has continued, so there remains at present a very large number of owners of Grand Terre, each holding a fraction of an undivided interest in the island (Taxpayer List, Grand Terre Island, U.S. Army Corps of

Engineers Real Estate Section). Some of these owners are direct descendants of 1893 purchasers. The total number of owners of undivided interests is so large that complete chain of title was not pursued for the period from 1931 to 1995. Unfortunately, the total acreage of the island is rapidly eroding; thus, the individual interests in Grand Terre are corresponding to ever-smaller portions of land.

Maps such as the U.S. Coast Survey of 1878 (Figure 12) and the U.S. Coast and Geodetic Survey map of 1902 (Figure 13) show Grand Terre to have been very much larger in the late nineteenth century than it is today. It may be that the area of contiguous land on Grand Terre Island was actually larger in the late-nineteenth century than it had been in the middle of the century. Barnard's map of 1841 (Figure 4) shows a "cut off" between Bay Melville and the Gulf of Mexico, probably at what is now referred to as Pass Abel. This cut-off appears to have filled in during the second half of the nineteenth century. By 1878, a portion of the island, bounded by Bay Melville, Quatre Bayou Pass, Ronquille Bay, Cat Bay, and Barataria Bay, is shown attached to Grand Terre proper. This circumstance remained through at least the early years of the twentieth century (USGS 1902). The areas of ground formerly attached to Grand Terre have been referred to as the Grand Terre Islands since their separation (or reseparation), and are now only a fraction of their size earlier in the twentieth century. Some of the erosion of the eastern end of Grand Terre was probably initiated by the 1915 hurricane, which produced a 3 m storm surge on neighboring Grand Isle (Williams et al. 1992:98).

In recent decades, erosion has had a severe impact on Grand Terre. Although the overall area of the island has shrunk dramatically, not all parts of the island have been affected equally. An undated aerial photograph of Fort Livingston, possibly taken before 1945, shows the waters of Barataria Pass (Grand Pass) meeting the western wall of the fort (Williams et al. 1992:14). In recent years erosion on the Pass and Gulf sides of Fort Livingston has reversed, and the shoreline has built up. In the 1945 series aerial photographs of Grand Terre, the cane field ditch systems of the Forstall plantation are clearly visible. These ditches ran roughly parallel to the New (or Plantation Canal) and perpendicular to it, forming a grid of rectangular fields. The east-west ditch lines converged somewhat toward the eastern end of the island. The field ditch patterns indicate that cane was planted not only on the loam soil toward the Gulf side of the island but also the muck soil toward the bay side. This rectilinear grid of ditches was suggested by the few larger ditches and canals shown on the 1902 USGS map of Grand Terre (Figure 13). The ditches may have been larger on the bay side because of a greater need to drain the lower, wetter soil. The ditches remain noticeable on the most recent (1991) aerial photographs, but have become partially obscured by vegetation growth and natural infilling. Conversely, the remains of the Forstall plantation sugar house were not visible in the 1945 and 1960 aerial photos. It is possible that vegetation obscured the masonry foundations. However, in the 1972, 1983, and 1985 aeriels, the quadrilateral foundations of the sugar house are visible. The sugar house foundations could not be identified in the 1991 series of aerial photographs.

On parts of Grand Terre, erosion has been accelerated by the excavation of pipeline canals, particularly on the bay side of the island. From an examination of aerial photographs, these pipeline canals were begun in the period between 1945 and 1960. The large pipeline canals bisecting the island from east to west and forming a flattened "X," constructed for natural gas pipelines (Figure 1), cut across the rectilinear ditch system of the Forstall plantation. These two large pipeline canals have prominently visible spoil banks in the 1960 series aerial photos, suggesting that they were relatively recent at that date. The natural gas pumping station on the northern side of the island was also constructed by 1960. By 1972, the spoil banks of these canals had become covered with vegetation, and a third large pipeline canal had been constructed running roughly from east to west, closer to the Gulf side of the island. The Old Canal had also been widened from approximately the middle of the island to the bay. Erosion on the bay side of the island in the last 30 years has dramatically reduced the extent of

land to the west of the intersection of the ca. 1955-1960 canals and on the bay side of the island generally. The extent of the bay-side erosion is immediately evident from a comparison of the 1960 and 1991 aerial photographs.

Planning by the Louisiana Wildlife and Fisheries Commission of a proposed Marine Research laboratory on Grand Terre began in 1957, when a topographic survey of the island was conducted and a site selected. Construction of the site facilities was completed in 1960. Dr. Lyle S. St. Amant was the first department biologist in charge at the new laboratory. In 1982, the station was named the Lyle S. St. Amant Marine Biology Laboratory in his honor. In 1965, dormitory and duplex facilities and a 42,000 gallon cistern were added. Also in 1965, Hurricane Betsy did extensive damage to the facility. The main buildings survived structurally intact, but virtually everything at ground level was destroyed or swept away. In the period 1969-1970, substantial repairs and additions were undertaken at the facility. These included the construction of 16 one-quarter acre ponds for fish and shrimp culture, and construction of a seaplane hangar. In the first 15 years of the station's operation, the emphasis of research was on oyster, shrimp, and plankton studies (Waldo 1957: 2-3; Louisiana Wildlife and Fisheries Commission 1970: 88).

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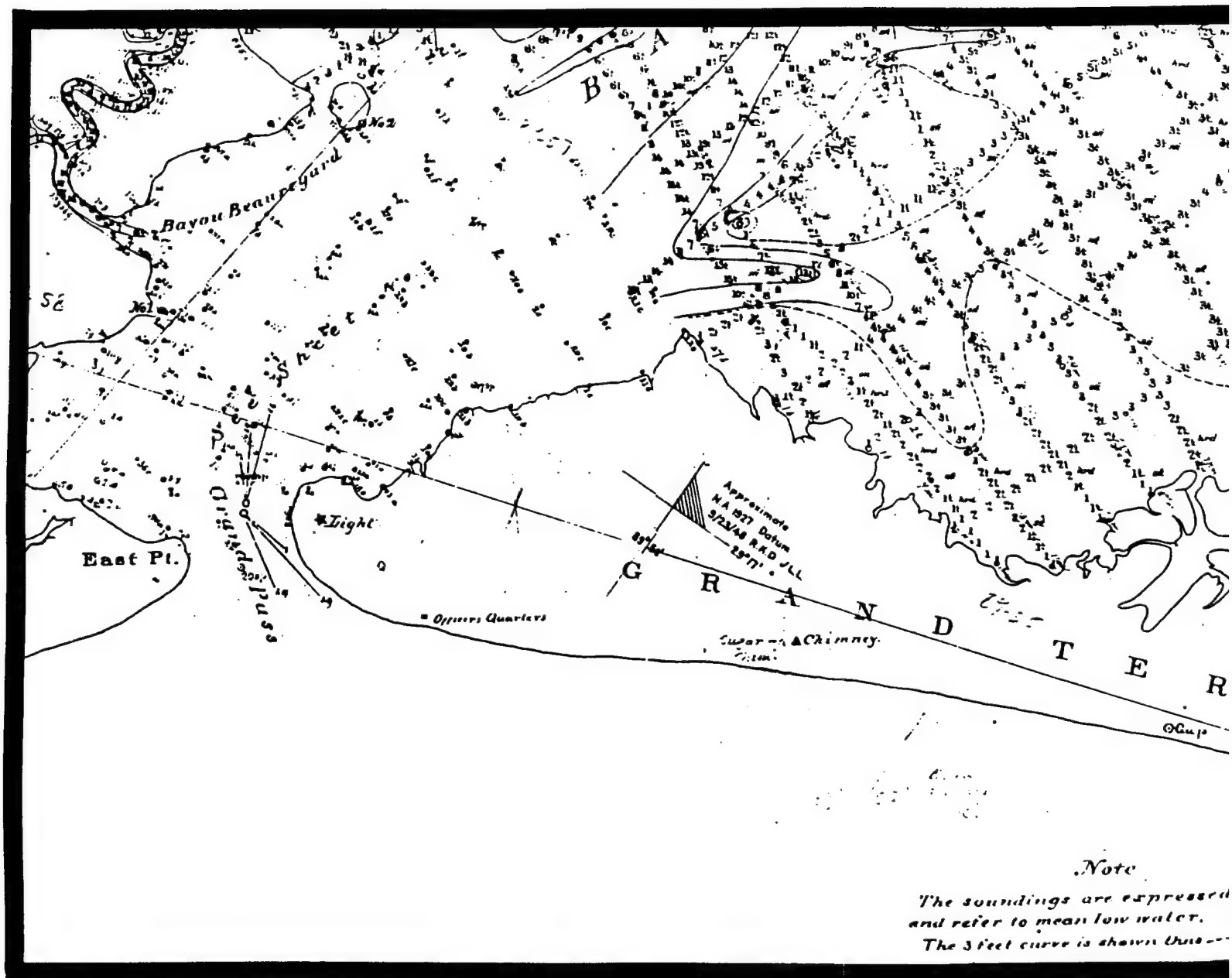
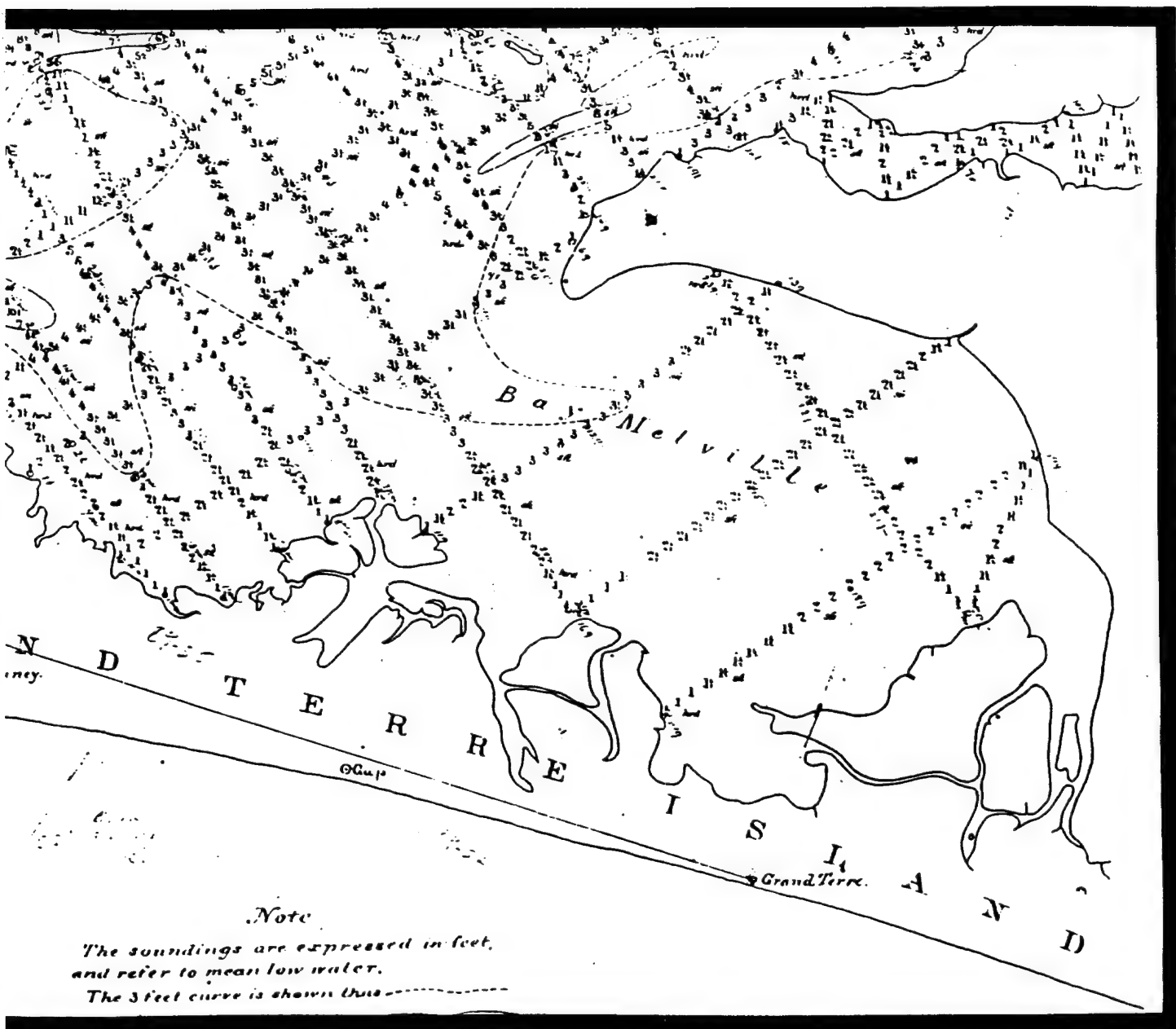


Figure 12. Excerpt from U.S. Coast Survey, Barataria Bay, Louisiana (U.S. Coast Survey Archives Division, National Archives).

(2)



Coast Survey, Barataria Bay, Louisiana, 1878 (Cartographic
chives).

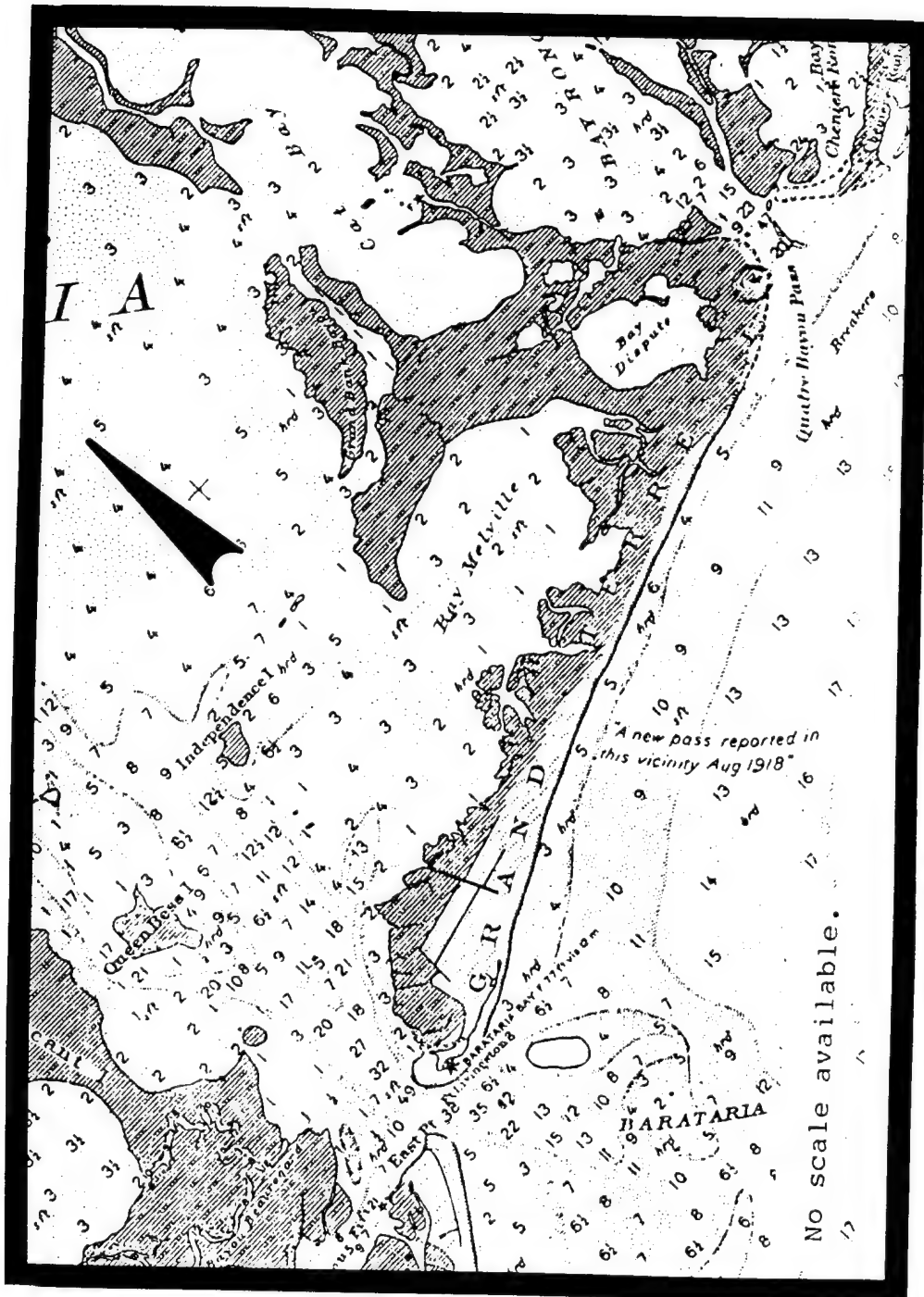


Figure 13. Excerpt from *Barataria Bay and Approaches*, U.S. coast and Geodetic Survey, 1902 (Louisiana Collection, Howard-Tilton Memorial Library, Tulane University).

CHAPTER 5 PREVIOUS INVESTIGATIONS

During intensive cultural resources survey along the routes of proposed maintenance dredging and spoil disposal of the Bayou Segnette, Barataria Bay, and Bayou Rigaud waterways, Coastal Environments, Inc., recorded 16JE49, 16JE127, 16JE128, and 16JE129 (Gagliano et al. 1979). The entire Barataria Basin was included in the study, rather than just the waterway banklines. By using this approach, it was possible to relate "...archeological and historical sites located along a limited, linear survey route... to the overall physical and cultural environment of which they were once part" (Gagliano et al. 1979:ii). Fort Livingston (16JE49) was only site on Grand Terre that was located within CEI's survey area (Gagliano et al. 1979:1/11). This site had been listed in the National Register of Historic Places in 1974. It is the only property listed in the NRHP located on Grand Terre, and it is located outside of the current project area. 16JE127, 16JE128, and 16JE129 were all outside of the survey area. However, they were visited because they were within the larger study area, and it was presumed that these sites could provide insights into the history of the region.

16JE127, 16JE128, and 16JE129 were only briefly visited. Surface collections were made, and site forms were completed for each of the sites. The Grand Terre Pipeline Canal site (16JE127), was described as a "dredged historic site" marked by a scatter of brick and oyster along a pipeline canal. On the basis of the site's disturbed condition, it was recommended as being ineligible for inclusion in the NRHP (LA State Site Files). The Lafitte Settlement site (16JE128), consisted of an oyster and *Rangia* midden, with a very high density of cultural material located for approximately 70 m along the bank and offshore. Although site preservation was deemed to be poor, and no architectural or archeological features were noted, the site was recommended as being eligible for nomination to the NRHP on the basis of its probable association with the Baratarian settlement on Grand Terre (LA State Site Files). Remains at Forstall Plantation (16JE129) consisted of the ruins of the sugar house chimney and depressions that were interpreted as the sites of former houses. The site was recommended as being eligible for nomination to the NRHP on the basis of probable preservation of subsurface features at the site.

R. Christopher Goodwin and Associates, Inc., revisited the four known sites on Grand Terre as part of their inventory of archeological and historical sites in Jefferson Parish (Goodwin et al. 1985). Site inspection consisted of surface reconnaissance and probing. At Fort Livingston, they noted that erosion continued to threaten the structure, but that its status was unchanged since Coastal Environments' 1977 site visit (Goodwin et al. 1985:259). A redeposited scatter of a few shells and brick fragments was noted at 16JE127. This site was described alternately as "largely destroyed" (Goodwin et al. 1985:269) and "destroyed" (LA State Site Files). At 16JE128, no historic artifacts were observed in association with a *Rangia* shell lens that was recorded as measuring 40 m in length. In addition, no historic material was observed offshore. They stated that the site had apparently been destroyed by the dredging of several pipeline canals and the creation of dams sealing the canal ends (LA State Site Files). The sugar house chimney at 16JE129 had been reduced to a mound of rubble by the time of Goodwin and Associates' revisit, but the site was otherwise unchanged since it had been recorded by Coastal Environments. The site was recommended as being eligible for nomination to the NRHP because it provided the last pristine barrier island plantation context available for excavation.

16JE128 was visited by Mr. Allen Saltus during 1989. The purpose of the visit was to confirm that the site had in fact been destroyed, as had been reported by Goodwin et al. (1985). It was not undertaken as part of a Section 106 compliance effort. An abundant scatter of early-nineteenth-century ceramics, glass, and bone demonstrated that portions of the site

were still preserved. Mr. Saltus concluded that artifacts were distributed variably across the site, and that the site had eroded to a materially poor area at the time of Goodwin et al.'s visit.

At the time of Mr. Saltus' visit, the land extended approximately 14 m farther north into Barataria Bay than it does at present. He observed a partially buried feature comprised of vertical wood boards which he interpreted as a well. He also recorded other wood features that appeared to be structural in origin. Mr. Saltus utilized an iron rod stuck in the ground as a datum for mapping the site.

The project area was inspected by the New Orleans District, Corps of Engineers during November 1994 (Scope of Services, Appendix I). It was noted that 16JE127 and 16JE128 had changed little since they were updated in 1985 by Goodwin and Associates. Change was more visible at 16JE129. Here, the sugar house remains had undergone further deterioration. Considerable amounts of brick rubble were scattered along the shore, and erosion increasingly threatened the structure. Linear vertical plank features were observed immediately to the west of the sugar house; this was the first time these features were recorded. Drainage canals, livestock fences, and low spots interpreted as the possible sites of former standing structures were also observed.

FIELD CHAPTER 6 INVESTIGATIONS

Introduction

Two canals were associated with nineteenth-century activities on Grand Terre, and three previously-recorded site locations appear to represent areas likely for encountering significant cultural resources. Results of Phase 1 investigations identified high probability areas for cultural resources within the project area. Phase 2, terrestrial and marine survey and site delineation, focused on the canal system and the three known sites. The methodologies employed along the Old and New Canals and at each of the three sites delineated are presented below.

Selection of Areas for Survey

Six canals and remnant drainages are visible on modern maps of Grand Terre (Figure 14). Two of these, the Old (or Lafitte) Canal and the New (or Plantation) Canal, are illustrated on nineteenth-century maps of the island (Table 14). Two others, designated Unnamed Canals 1 and 2 on Figures 14 and 15, are modern pipeline canals that first appear on aerial photographs of the island. Because the latter two canals are relatively contemporary, they were excluded from consideration for survey. However, since both the Old and the New Canals were in use during the nineteenth-century, historic activity is presumed to have been focused along and within these channels (Table 14). Terrestrial and magnetometer surveys were therefore concentrated in these two canals. It should also be noted that in terms of terrestrial survey, most of what little dry land there is within the project area is located along these channels.

In addition to the above canals, two small drainages are visible on contemporary maps (Figures 14 and 15). These appear to be the remnants of agricultural drainages. Because these were formerly located within the plantation fields, no cultural material was anticipated along or within these drainages (Table 14). To confirm this, magnetometer survey was conducted within the navigable portions of these channels (Figure 15).

Investigations Along the Old (Lafitte) Canal

Terrestrial survey along the Old or the Lafitte Canal originated at the mouth of the canal on Barataria Bay. It consisted of a single transect placed 20 m inland from each bank. Auger tests were excavated at 20 m intervals generally to a minimum depth of 1 m and to a maximum depth of 1.2 m. In some cases, the tests were terminated shallower depths (>60 cm) because water and soil filled the hole faster than undisturbed soil could be excavated. Excavated soil was trowel sorted, since screening was not feasible due to the nature of the soils. Fourteen auger tests were excavated on the north bank of canal, and 16 auger tests were excavated on the south bank. None of the auger tests along the Old Canal were positive for cultural materials. Two strata were observed in the auger tests. A 5Y 3/2 (dark olive green) sand extended to depths of 5 to 80 cm below ground surface. Beneath this was a layer of 5YR 4/1 (dark gray) clayey sand. Figure 14 shows the actual area covered by terrestrial survey.

During low tide, it was possible to visually inspect the bottoms of the channel, and portions of it were walked while feeling for submerged features. Wire drag also was conducted at the present-day mouth of the Old Canal adjacent to 16JE128. A 30-foot long piece of .25 inch braided stainless steel wire weighted with galvanized pipe and with handles at each end was utilized for the wire drag. Two crew members spaced 3 to 8 m apart walked parallel to each other in the water until the wire caught on an object (e.g., protruding post, rock, metal fragment) at the bottom of the canal or the bay. Once the wire was caught on an object, the

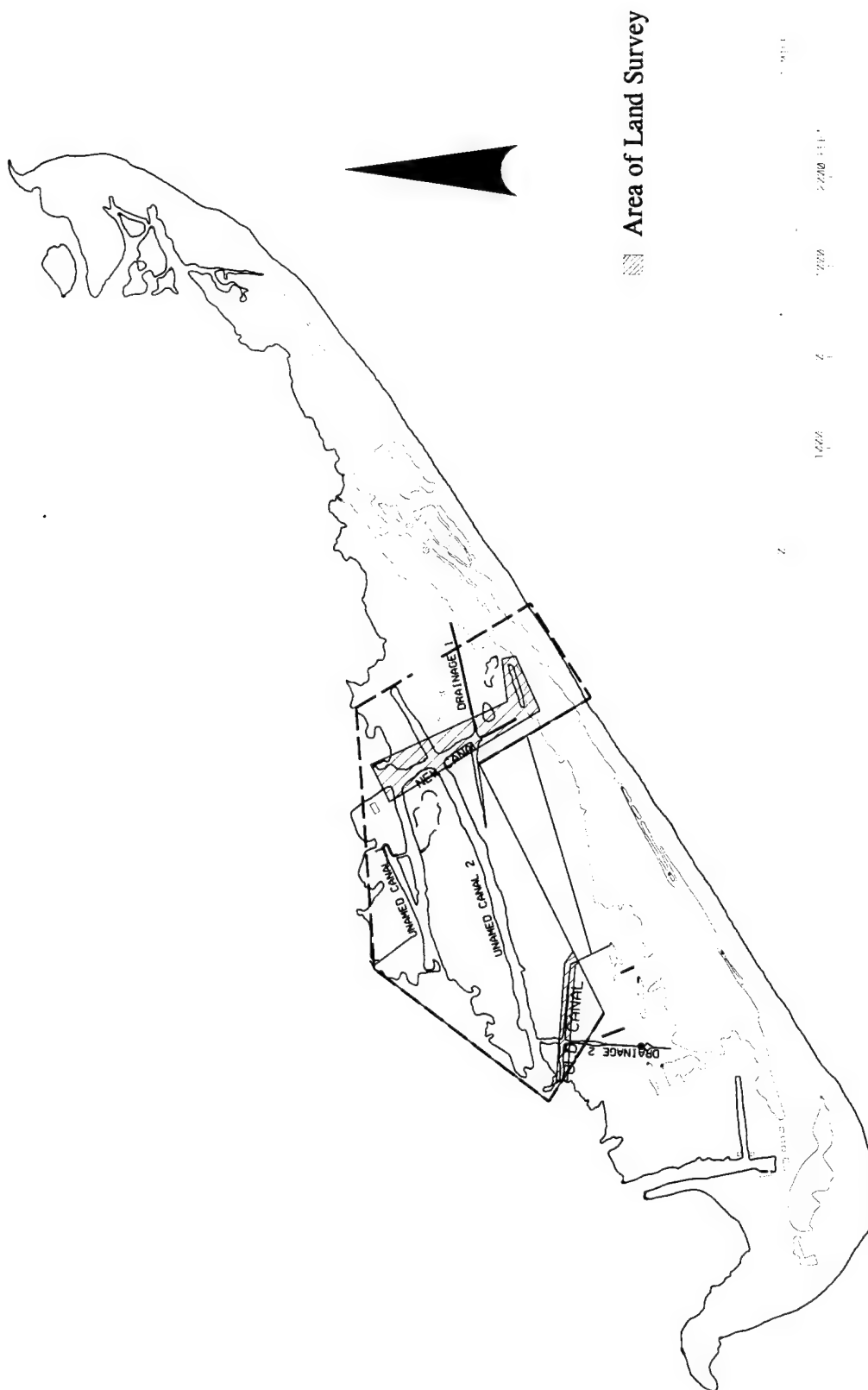


Figure 14. Area covered by land survey.

Table 14. Expectations and Observations on Grand Terre Island Canals.

Canal	Occurrence on Maps¹	Presumed Function	Archeological Expectations	Field Observations
Old (Lafitte) Canal	1833, 1841, 1853, 1886, possibly 1902	Transportation corridor for plantation and Baratarian settlement.	Remains of the Baratarian settlement near the present mouth of the canal. Possibility of docks, additional structures, and boats along the length of the canal. Landing and/or warehouses related to plantation anticipated at inland terminus.	Remains of Baratarian settlement found, but no other evidence of structures, docks, or boats observed. Three minor magnetic anomalies, all considered spot finds. Probably primary transportation route to plantation.
New (Plantation) Canal	1841, 1853, 1886, 1902	Transportation corridor for plantation.	Landing anticipated at inland terminus. Possibility of docks, additional structures, and boats along the length of the canal. 16JE127 presumed to be a landing.	Primary function probably drainage. 16JE127 likely a pumping station. Minor landing at inland terminus; no other evidence of structures, docks, or boats observed. One minor anomaly, one related to pipeline, all others related to 16JE127 and 16JE129.
Unnamed Canal 1 (see Figures 14 and 15)	first shown on 1956 aerial photographs	Pipeline canal.	Remains of pipeline, modern construction and industrial debris. No historic deposits anticipated.	Not surveyed.
Unnamed Canal 2 (see Figures 14 and 15)	first shown on 1972 aerial photographs	Pipeline canal.	Remains of pipeline, modern construction and industrial debris. No historic deposits anticipated.	Not surveyed.
Drainage 1 (see Figures 14 and 15)	project map	Agricultural ditch remnant	No historic deposits anticipated	Partial magnetometer coverage, no anomalies
Drainage 1 (see Figures 14 and 15)	project map	Agricultural ditch remnant	No historic deposits anticipated	Partial magnetometer coverage, no anomalies
¹ See Figures 2, 3, 4, 5, 11, 12				

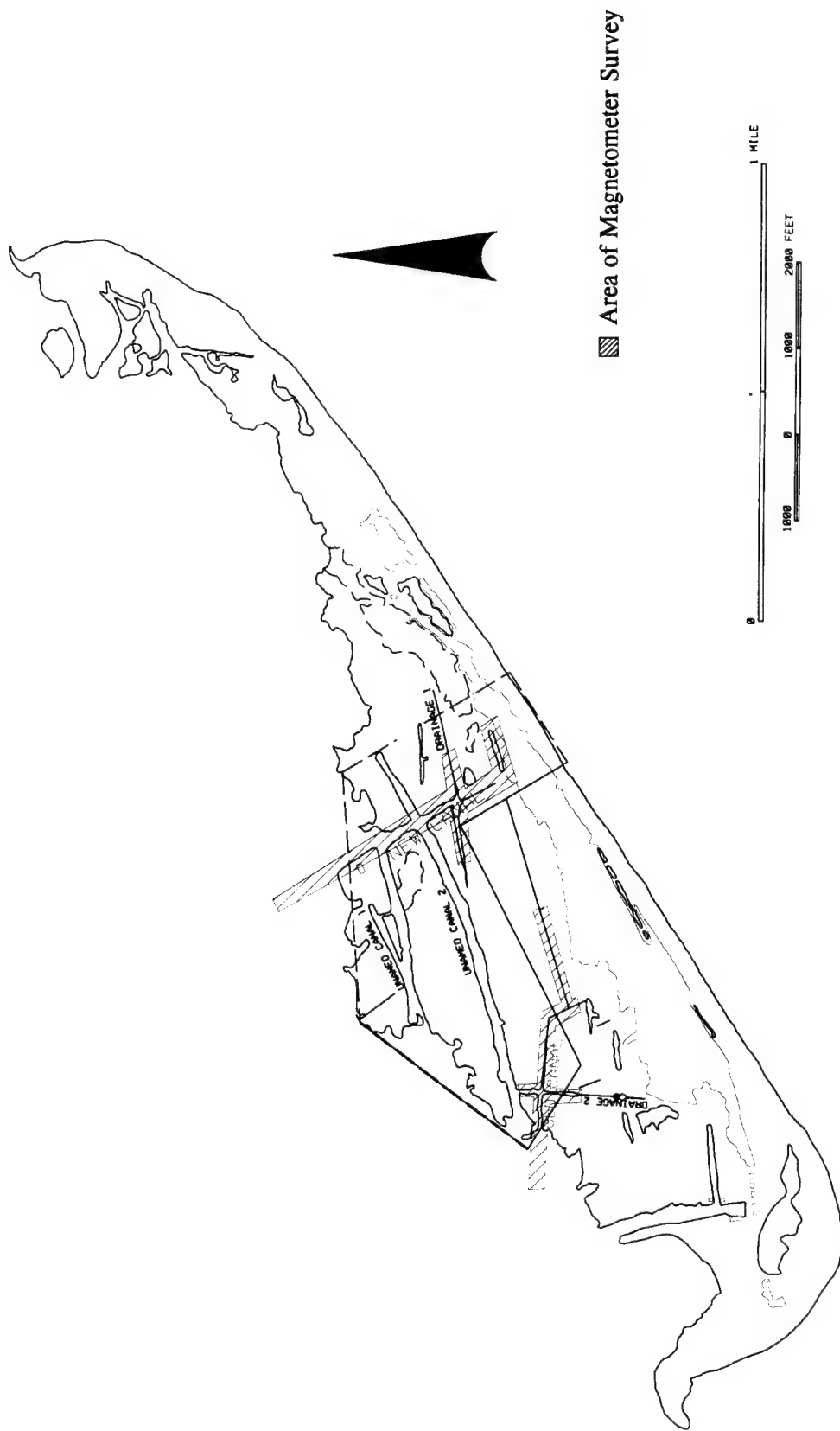


Figure 15. Area covered by magnetometer survey.

crew members walked toward the object while maintaining tension on the wire. The crew members then attempted to identify the object by feel, and the location of the object was marked with stakes or floats. Wire drag within the Old Canal extended out into Barataria Bay more than 9 m, to where the land has only recently eroded.

Magnetometer survey was conducted within the canal to identify resources such as boats and landings (Figure 15). A 15-foot Delta Queen aluminum bateau with a 9.9 horsepower Johnson outboard motor was utilized. This vessel was selected since it could be dragged over shallow water areas as needed and was small enough to navigate through the snag areas in the upper reaches of the Old Canal. A Geometrics G-866 proton professional magnetometer was used to perform the survey. The magnetometer sensor was mounted on an aluminum pole which extended forward of the bow of the vessel in order to distance the sensor from magnetics located within the survey vessel itself. The results achieved a magnetic record with less than 1 gamma of noise. Predetermined shotpoints located along the survey route were used and annotated on the magnetometer strip chart and on a 1965 U.S. Army Corps of Engineers aerial photograph. A single survey transect was made down the Old Canal. This provided a coverage of the survey area with the magnetometer's sensor from 6.1 to 9.1 m from any ferrous object lying on the basin-shaped canal bottom. Locations of anomalies were plotted on maps and were marked with pink flagging attached to lead weights, so that the locations could be examined and mapped upon completion of magnetometer survey. In addition, a .2 km trajectory of the canal extending into Barataria Bay was surveyed. No fathometer records were generated since the water was too shallow for this piece of equipment to function.

All anomalies were revisited to determine maximum inflection, area, and general nature. Shovel tests excavated to a maximum depth of 40 cm and/or probing to a depth of 2 m supplemented with metal detector scanning was employed to delineate the vertical and horizontal extent of the anomalies. The locations of anomalies were recorded with an Hewlett Packard H/P 3810 Total Station, which is an infrared electronic distance meter (EDM) coupled with a twenty second theodolite. Locational data were based on two of the U.S. Army Corps of Engineers Grand Terre Monuments (FL-4 and FL-5) and their locational data as noted in the New Orleans District Traverse Computations, North American 1927 Datum, Louisiana South Zone, dated October 24, 1991.

Magnetic surveying involves measurement of the earth's magnetic field intensity, in gammas, using a magnetometer. Details on the physics and mechanics of magnetometers are discussed elsewhere (e.g., Aitken 1958; Breiner 1973; Saltus and Pearson 1990). A variety of objects and materials, including some buried archeological features, cause localized disturbances, or "anomalies," in the earth's magnetic field that can be detected with a magnetometer. Archeological objects typically located by magnetic survey can be divided into three categories: (1) iron or other ferrous materials; (2) burned features such as hearths, kilns, bricks, and daub; and (3) unfired features such as walls and wall trenches, ditches, storage pits, and wells. The first category is most easily detected, since ferrous objects cause substantial magnetic disturbances. The other two categories generally are detected less easily. They are caused by variations or disturbances within the clay substrata -- pyrite concentrations, faults, and various other magnetic fluctuations. The current study focused on locating large or numerous ferrous objects associated with submerged watercraft, landings, or structures.

Magnetic signatures (anomalies) can be characterized by two nonexclusive factors, strength (intensity), and shape. Both factors are dependent upon a variety of anomaly source characteristics, including size, shape, number of objects, orientation, and mass; magnetic susceptibility; distance of the anomaly from the point of measurement; and, magnetic properties of the surrounding matrix. Magnetic anomalies caused by a single-source ferrous object typically form a positive-negative anomaly pair known as a dipole. The dipole normally is oriented along the axis of magnetization, with the negative portion located nearer the north

pole of the source object. The positive portion of the anomaly commonly is of greater intensity than the negative portion. Monopolar anomalies often are formed by non-ferrous geological features, linear objects such as pipes or long rods where only one end is detectable with the magnetometer, and dipolar anomalies in which only one of the poles is detected in the search pattern. Historic shipwrecks, which often contain numerous ferrous objects, usually produce complex magnetic signatures comprised of multiple dipole and/or monopole anomalies. This class of signature is particularly apparent when the wreck is scattered and dispersed.

Anomalies of archeological interest can vary from several hundred gammas or more, to less than one gamma, depending upon the characteristics and orientation of the source, material, and its distance from the point of measurement. As a rule, the strength of an anomaly is proportional to the inverse cube or square (depending on orientation) of the distance between the source and the point of measurement. Because of this rapid decline in anomaly strength, objects near the sensor are more likely to produce marked variation in magnetic intensity than are more distant objects. A variety of techniques have been developed to estimate distance of the anomaly from the sensor, all of which have varying degrees of error (Breiner 1973).

Even though a considerable body of magnetic signature data for shipwrecks is available, specific signatures cannot be positively associated with shipwrecks or other features and objects. The variation in iron content, condition, orientation, and distribution of a shipwreck all influence the intensity and configuration of the anomaly produced. In general, the magnetic signatures of moderate and large watercraft, or portions of watercraft, are large in area, minimally 24 to 27 m diameter across their smallest dimension, range from moderate to high intensity (greater than approximately 30 gammas) at a distance of 6 m, and may or may not be complex in nature. Complexity of an anomaly is influenced largely by distance of the sensor from the source. For example, a magnetic anomaly recorded with the sensor located close to a shipwreck may exhibit a complex configuration, as the sensor records individual ferrous objects. At a greater distance, the signature may resemble a single dipolar anomaly, with the entire wreck recorded as a single object. Riverine anomalies smaller than 9 x 18 m are generally considered not significant, since they normally represent flotsam or jettisoned material (e.g., paint cans, 55-gallon drums, camshafts, small anchors, small vessel parts, cable, chain, tires, and appliances). Examples of magnetic signatures of identified anomalies are presented in Table 15.

Other considerations for anomaly significance include the cartographic reconstruction of waterways, and anomalies that are derivative of geologic processes. Portions of rivers are old enough to have remains of historic watercraft. This is especially true of the Mississippi and Red Rivers, where natural dynamic hydrological processes are in operation, along with manmade modifications. Flat boats and other small vessels may be preserved along canals. Some magnetic anomalies are geological. Ferrous conglomerates, such as pyrites, have a magnetic quality and can produce magnetic anomalies. Some clays also produce magnetic anomalies. Anomalies of four to twenty gammas have been observed from ferrous conglomerates. They are believed to be caused by fluctuating clay strata associated with slump blocks, crossing old channel courses and at current channel mouths. The inherent magnetic quality of the clays is formed when they are deposited in a magnetic alignment. This clay surface in shallow water makes up a fair or large portion of the ambient magnetic field. If this surface undulates and is close to the sensor, the results can affect the magnetic readings. Slump blocks, erosional channeling, and crossing old channels affect the magnetic record through these undulating surfaces as the distance from the clay source to the magnetometer's sensor varies. The results are changes in the magnetic field and are recorded on magnetometer data as anomalies.

Table 15. Selected Magnetic Signatures of Known Objects.

OBJECT	SIZE OF OBJECT	AREA	MAGNETIC (GAMMAS)
Single Objects:			
engine camshaft	51 x 5 cm (20 x 2")	15.2 x 13.7 m (50 x 45')	45
cast iron soil pipe	3 m long (10')	19.8 x 13.7 m (65 x 45')	1407
iron anvil	68 kg (150 lbs.)	7.9 x 7.9 m (26 x 26')	598
cable	36 m (120') GRC	61 x 61 m (200 x 200')	75
iron kettle	56 cm Dia. (22")	7 x 7 m (23 x 23')	200
iron anchor	1.8 m shank (6')	82.3 x 24.4 m (270 x 80')	30
Multiple Objects:			
pipe and bucket	2.4 m pipe (8')	18.3 x 15.2 m (60 x 50')	250
2 pipes	3 m (10') and 0.9 m (3')	33.5 x 33.5 m (110 x 110')	645
burn pile	2.4 Dia. x 20.5 cm (8' x 8")	12.2 x 9.1 m (40 x 30')	20
Shipwrecks:			
Coastal sailing craft wood	27.4 x 6.1 m (90 x 20')	76.2 x 45.7 m (250 x 150')	35
Wooden steamer <u>Lotawanna</u>	54.9 x 14.3 m (180 x 47')	106.7 x 91.4 m (350 x 300')	310
Wooden steamer <u>Spray</u>	42.7 x 5.5 m (140 x 18')	64 x 48.8 m (210 x 160')	520
Schooner <u>James Stockton</u>	16.8 x 5.8 m (55 x 19')	39.6 x 27.4 m (130 x 90')	80
Ocean Merchant <u>EL Nuevo Constante</u>	38.4 x 7.9 m (126 x 26')	76.2 x 45.7 m (250 x 150')	65
Ironclad <u>CSS Tuscaloosa</u>	45.7 x 12.2 m (150 x 40')	91.4 x 61 m (300 x 200')	4000
Gasoline sternwheeler machinery removed	15.2 x 3 m (50 x 10')	61 x 42.7 m (200 x 140')	450
1840's towboat machinery removed	19.8 x 4 m (65 x 13')	33.5 x 18.3 m (110 x 60')	110

Three anomalies were recorded during the magnetometer survey of the Old Canal:

Anomaly 1. Magnetometer readings revealed the presence of a small ferrous object or concentration submerged on the east side of the canal (Figure 16, Table 16). The maximum inflection is 285 gammas, and the magnetic nature is dipolar. The area of the anomaly measures approximately 26.8 x 12.2 m. Probing failed to identify the nature of the object, although a hard subsurface was felt during probing. This was determined to be the original canal bottom. By probing the entire width of the canal, it was possible to draw a cross section illustrating the original canal depth. This cross section (Figure 17) suggests that as a result of infilling and subsidence, historic cultural material could be buried as much as 2 m below the present land surface. This anomaly is considered a spot find, and it has not been assigned a site number.

Anomaly 2. Magnetometer readings revealed the presence of a small ferrous object or concentration submerged on the east side of the canal (Figure 16, Table 16). The maximum inflection is 891 gammas and the magnetic nature is dipolar. The area of the anomaly measures approximately 15.2 x 15.2 m. Probing failed to identify the nature of the object. A hard subsurface felt during probing could be the original canal bottom. A cross section of the canal (Figure 17) suggests that the historic material could be buried as much as 2 m below the land surface. This anomaly is considered a spot find, and it has not been assigned a site number.

Anomaly 3. Magnetometer readings revealed the presence of a small ferrous object or concentration submerged on the east side of the canal (Figure 16, Table 16). The maximum inflection is 360 gammas, and the magnetic nature is dipolar. The area of the anomaly measures approximately 15.2 x 22.9 m. Probing failed to identify the nature of the object. A hard subsurface was felt during probing; this could be the original canal bottom. A cross section of the canal (Figure 17) suggests that the historic material could be buried as much as 2 m below the land surface. This anomaly is considered a spot find, and it has not been assigned a site number.

Magnetometer readings indicated that ferrous objects are also present in the submerged portion of 16JE128, west of the confluence of the Old Canal and Barataria Bay and outside of the project area. Upon completion of the magnetometer survey of the trajectory of the canal extending into Barataria Bay, three random north/south transects were made over what was presumed to have been a submerged portion of 16JE128. The number of transects was limited because of the wave action and shallow water. Readings were not taken of individual anomalies, since the objective was to merely confirm that ferrous materials were present in this area.

Nature and Presumed Use of the Old (Lafitte) Canal

The Old Canal is irregular on the aerial photographs with several points of intersection (P.I.). The canal follows a north/south ridge until it intersects with a natural drainage. It turns to follow an east/west course paralleling the beach ridge (Figure 14). The meandering course and orientation of the Old Canal suggest that it may have been a natural channel that was straightened and deepened. The distance between the ridge and the canal remain almost constant.

A 2 m probe was used to identify the original bottom surface of the canal. The results show that the original canal bottom is a maximum of about 2 m below the present water surface. It is covered with up to 1.5 m of sediments (Figure 17). The active width of the canal was 9.77 m with a 2 m water depth or 12.8 m with a .6 m water depth. This canal would have been wide enough to allow many types of watercraft to pass one another (e.g., skiffs, feluccas, small yachts, bateaux, keelboats, and barges). Keelboats, bateaux, and feluccas, with their double-ended shapes, would have been well suited for this purpose.

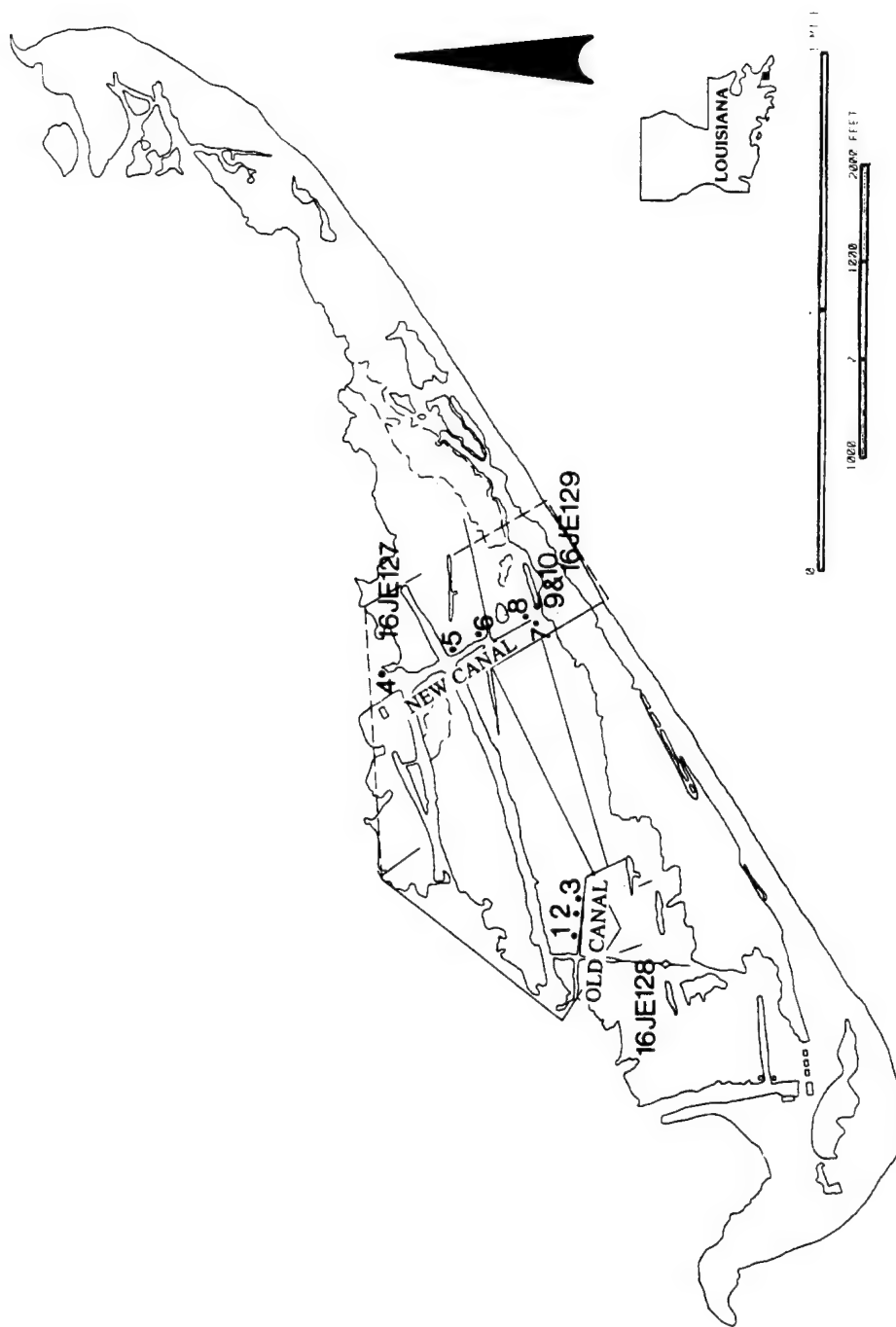


Figure 16. Locations of magnetometer anomalies and sites.

Table 16. Magnetic Anomalies, Grand Terre Survey.¹

Old Canal Anomalies				
Anomaly Number	Maximum Inflection (gammas)	Area	Northing	Easting
1	285D ²	26.8 x 12.2 m (88 x 40')	226025.644	2444993.889
2	891D	15.2 x 15.2 m (50 x 50')	225998.749	2445268.249
3	360D	22.9 x 15.2 m (75 x 50')	225981.312	2445391.676
New Canal Anomalies				
Anomaly Number	Maximum Inflection (gammas)	Area	Northing	Easting
4	19D	4.6 x 4.6 m (15 x 15')	(see Figure 19)	
5	117D	7.6 x 7.6m (25 x 25')	227330.654	2448108.148
6	791D	61.0 x 22.9-30.5 m (200 x 75-100')	227213.803 227366.626	2448235.885 2448518.794
7	20M ³	29.0 x 9.1 m + (95 x 30' +)	226575.56	2448398.5
8	1,795D	7.6 x 9.1 m (25 x 30')	226579.192	2448449.747
9	32D	3.7 x 3.7 m (12 x 12')	226507.7	2448614.095
10	40D	7.6 x 9.1 m (25 x 30')	226507.7	2448614.095

¹ Magnetic anomalies include the maximum gamma inflection, duration (area of anomaly), magnetic nature, and location of these anomalies. Locational data are based on U.S. Army Corps of Engineers Grand Terre Monuments (FL-4 and FL-5) and locational data noted in the New Orleans District Traverse Computations, North American 1927 Datum, Louisiana South Zone dated 10/24/91.

² Dipolar anomaly

³ Monopolar anomaly

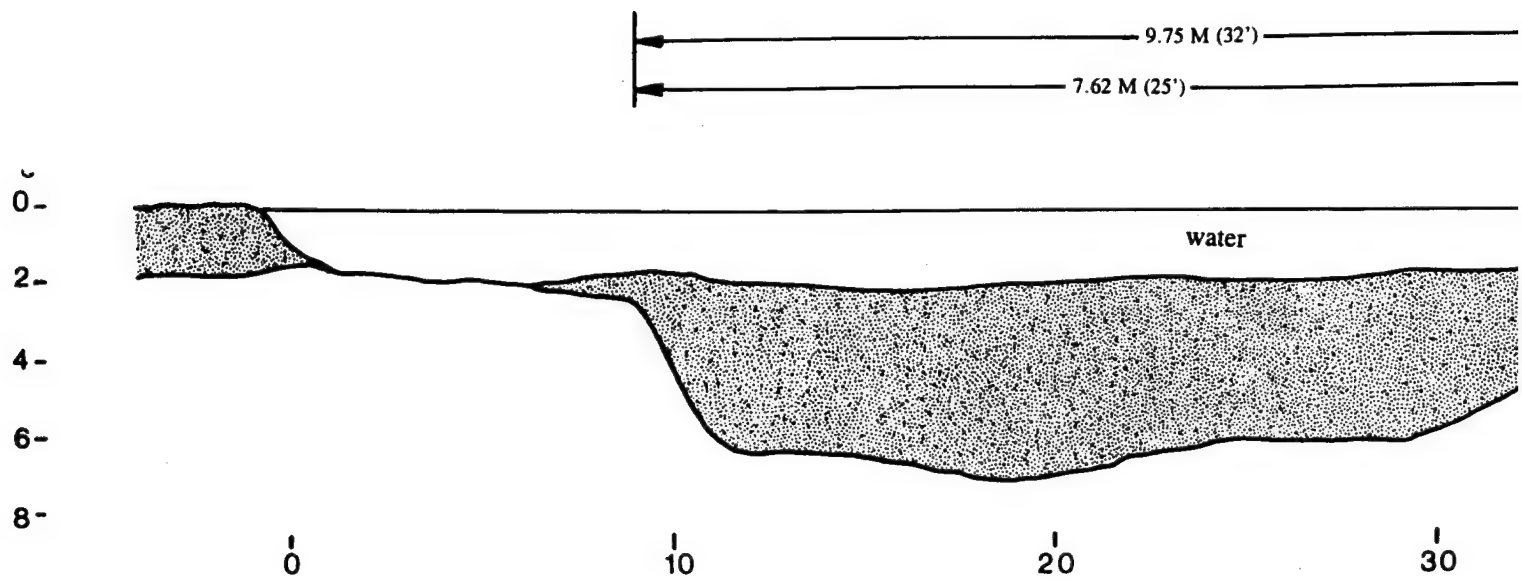
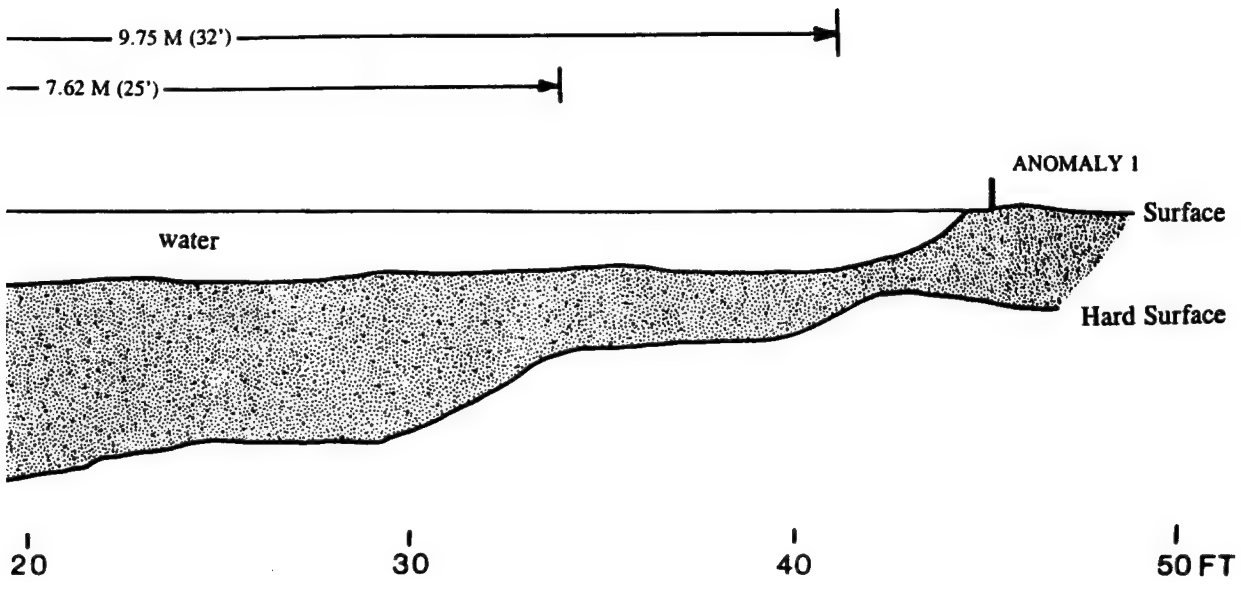


Figure 17. Cross-section of Old (Lafitte) Canal.

2



ss-section of Old (Lafitte) Canal.

As shown in Figure 17, probing revealed a lower bank approximately 2.1 m wide on the east side of the canal, just west of Anomaly 1. This lower area along the bank may have been a natural feature or a landing. However, the magnetic anomaly in this vicinity lacked the strength that would be expected from docks or other features associated with a landing.

The period of construction or when improvement of the canal was initiated has not been determined. The canal is not shown on the 1813 Lafon map (Figure 7), but it is visible on an 1833 map (Figure 3). If the canal is actually an improved natural feature, which seems likely, it was undoubtedly used when the island was first settled. Subsequently, it was widened and dredged, and it may not have been delineated until these improvements were made. As noted in Chapter 4, it seems likely that these improvements occurred during François Mayronne's tenure on Grand Terre. An 1841 map identifies the old and new canals on the island (Figure 4). If a new channel was excavated during the late-1830s, the Old Canal would have been the sole avenue for the intra-island transport of products and equipment until the former's construction. Two small fragments of paving tiles, resembling tile fragments found at 16JE129, were observed eroding out of the root mat at 16JE128. While this does not provide conclusive evidence, it suggests that the Old Canal continued to be used to transport goods to and from the building complex at the Forstall Plantation on the south side of the island.

Magnetometer survey and augering failed to identify cultural features of any size along the course of the canal. The three ferrous anomalies are small. Because of their depths below the sediments and the water level, they were not recovered and positively identified. These objects could have been associated with boat traffic on the canal, agricultural activities in the fields of the plantation, or the installation of powerlines and construction of pipelines on the island. Neither the magnetometer readings nor examination of the locations of anomalies suggested that larger objects, including boats, docking features, or structures, are buried along the canal.

Investigations Along the New (Plantation) Canal

Terrestrial survey along the New Canal consisted of a single transect 20 m inland from each bank of the canal. Auger tests were spaced at 20 m intervals and generally were excavated to a minimum depth of 1 m and to a maximum depth of 1.2 m. In some cases, the tests were terminated shallower depths (> 70 cm) because water and soil filled the hole faster than undisturbed soil could be excavated. Excavated soil was trowel sorted, since screening was not feasible due to the nature of the soils.

The transect on the west side of the canal began at the inland terminus of the New Canal and extended to Barataria Bay, while the transect on the east side of the canal commenced at Barataria Bay and terminated inland. Twenty-five auger tests were excavated on the west side of the canal, and 21 auger tests were excavated on the east side. Two strata were observed within the auger tests. The uppermost was a 2.5Y 3/2 (dark grayish brown) silty sand, that extended to approximately 10 cm below surface. Beneath this was a layer of 5Y 3/1 (gray) silty sand which graded to a silty clayey sand below 50 cm.

Only one auger test was positive for cultural materials. This test was located on the east bank of the New Canal in the vicinity of Anomalies 7 and 8 and the plank group (below) (Figure 16). Brick and mortar fragments were recovered at 80 cm below ground surface. Because of its location at the terminus of the New Canal, material in this test is presumed to be associated with a canal landing in this area.

The procedures employed for marine survey along the New Canal generally duplicated those described above for the Old Canal. Wire drag was conducted at the mouth of the canal adjacent to 16JE127, to the south into the canal, and to the north into Barataria Bay. Wire drag along the shoreline of the canal was limited because of the presence of oyster bars. The only feature detected in this vicinity was a submerged upright post protruding from the bottom of the bay adjacent to 16JE127.

Magnetometer survey was also performed within the New Canal. The procedures used were the same as described above for the Old Canal. The trajectory of the New Canal was extended into Barataria Bay approximately .5 km, and this area was surveyed in order to examine the location of the channel prior to erosion of the bay shoreline. Anomaly 4 was the only reading along this trajectory that indicated that ferrous materials were present. Six other anomalies were identified within the canal system during the magnetometer survey. Their locations were plotted using the methodology described above for the Old Canal.

Anomaly 4. Magnetometer survey and the use of a metal detector revealed the presence of ferrous materials near a submerged post at 16JE127 (Figure 16, Table 16). This 19 gamma dipolar anomaly affects a 4.6 x 4.6 m area. Subsequent examination, accompanied by probing, revealed two encrusted ferrous objects in this locale. This anomaly is considered part of 16JE127 (below).

Anomaly 5. Magnetometer survey revealed the presence of a small ferrous object or concentration submerged along the east edge of the canal (Figure 16, Table 16). This anomaly is dipolar with a 117 gamma inflection. It extends across a 7.6 x 7.6 m area. Subsequent examination by probing and metal detector failed to relocate the anomaly. This anomaly is considered a spot find, and it has not been assigned a site number.

Anomaly 6. A strong, large, positive reading was found during magnetometer survey on the east side of the canal (Figure 16, Table 16). The maximum inflection of the dipolar feature is 791 gammas. It covers an area measuring approximately 61 x 22.9-30.5 m. Probing revealed a pipeline buried about 1 m below the base of the canal. It measures approximately 45.7 cm in diameter. Probing enabled the pipeline to be delineated for 111.9 m east of the canal. The pipeline could not be followed west, across the New Canal, because the channel bottom sediments did not support the weight of the archeologists. However, there is no evidence that the pipeline continues to the west bank of the New Canal. This pipe segment may be associated with either the 8-inch Wanda or the 12-inch Getty Oil pipelines. This anomaly is considered a spot find, and it has not been assigned a site number.

Anomaly 7. A broad field of anomalies was detected during magnetometer survey at the canal terminus by Forstall Plantation (Figure 16, Table 16). The land has subsided, and 20 cm of standing water and dense marsh grass cover the surface in this locale. This monopolar anomaly has a maximum inflection of 20 gammas. The area with positive readings measures 29 x 9.1+ m. Probing of the area failed to reveal any cultural materials or features other than a partially-buried wood post and two boards. During probing, a hard subsurface level under the canal sediments was identified. This appears to be the original canal bottom. Anomaly 7 is the presumed location of an inland canal landing associated with Forstall Plantation. The anomaly is therefore considered part of 16JE129 (below).

Anomaly 8. Magnetometer survey revealed the presence of a ferrous object or small ferrous concentration along the east bank of the canal (Figure 16, Table 16). This anomaly has a large dipolar inflection of 1795 gammas, but it only effects an area of 7.6 x 9.1 m. Probing revealed that a metal object approximately 30.5 cm long by 10.2-12.7 cm wide is buried approximately 106.7 cm below the present ground surface. Attempts to excavate the object with a shovel were unsuccessful because of its depth and the water level. Its proximity

to Anomaly 7 suggests that Anomaly 8 may also be associated with the presumed landing. It is therefore considered part of 16JE129 (below).

Anomalies 9 and 10. Magnetometer survey revealed the presence of small submerged objects or ferrous concentrations in the ponded area behind Forstall Plantation (Figure 16, Table 16). Anomaly 9 is a small dipolar anomaly with a 32 gamma inflection affecting a 3.7 x 3.7 m area. Anomaly 10 is a small dipolar anomaly with a 40 gamma inflection affecting a 7.6 x 7.6 m area. The objects were not found using metal detectors and a 2 m probe. The anomalies are located near Anomaly 7, and are probably associated with presumed landing. They are therefore considered part of 16JE129.

Nature and Presumed Use of the New (Plantation) Canal

The New Canal is wide and relatively straight near the north part of the island, but it narrows as it approaches 16JE129. It intersects with a very narrow, meandering channel that flows into two ponds north of the plantation structural complex. The relatively straight course of the canal and the reference to it as the New Canal on an 1841 map suggest that it is not a natural feature.

A 2 m probe was used to identify the original bottom surface of the canal in the area of the presumed landing at 16JE129. A cross-section of the canal bottom was drawn to document the original canal profile (Figure 18). The results show that the original canal bottom is a maximum of about 2 m below the present water surface. It is covered with up to 1.5 m of sediments. A post located along the trajectory of the cross-section appears to be located within a depression. The depressed area around the post was probably caused by stream flow or washover from a hurricane or other high energy storms.

The active width of the canal was 4.27 m with a 1.5 m depth or 7.01 m width with a .8 m water depth (Figure 18). It is thus both narrower and shallower than the Old (Lafitte) Canal. This may suggest that the primary function of the canal was agricultural drainage, rather than transport. Additional support of this contention is the distance of the New Canal mouth from the "Grand Pass" relative to the mouth of the Old Canal, as well as the shallow soundings in the bay near the entrance to the New Canal (Figures 12 and 13). Therefore, the Old Canal was also better situated for convenient transport of goods to and from the plantation and probably served as the main transportation corridor even after the excavation of the New Canal.

Nonetheless, it seems likely that New Canal may have also been utilized for transportation, at least within the plantation itself. The canal would have provided a more direct route to Barataria Bay from the plantation's structural complex, although it was farther from deeper water than the Old Canal. Skiffs, scows, and flatboats all could have navigated this channel, even though watercraft probably could not have passed each other because of the canal's narrow width.

None of the magnetometer readings along the New Canal were intensive enough to suggest that the remains boats, docking features, or structures are present. This is consistent with the interpretation that the primary function of the canal was drainage. The minor anomalies (Anomalies 7-10) located in the southernmost portion of the channel, along with the plank group in this area, may suggest that a modest landing, such as might be expected for a small boat, may have been present here at some point. Anomaly 4, which was associated with 16JE127, consisted of amorphous ferrous debris, may have derived from the pumping station that was likely located here (below). The remaining two anomalies consisted of a spot find and the remains of a pipeline. The former may have been associated with agricultural activities, light boat traffic, the installation of powerlines, or the construction of pipelines.

Site Delineation, 16JE127

16JE127, the Grand Terre Pipeline Canal site, consists of a deposit of oyster and *Rangia* shell hash along the east bank of the New Canal (Figure 19). Bricks and brick rubble are intermixed with the shell. A shallow oyster bar extends northwest from the bank toward Barataria Bay.

During field investigations, the eroded ground surface along the bank and the visible bottom of the edge of the canal were examined for artifacts. Very recent clear glass bottles and other modern debris were observed. Two nineteenth-century ceramic sherds were the only materials observed on the surface of the bank.

A terrestrial metal detector was utilized to examine the entire site area. Two positive readings were encountered. These locations were shovel tested, but only modern aluminum soda cans were found. Eight additional judgmentally-placed shovel tests were excavated (Figure 19) to determine if *in situ* cultural deposits are present in the area adjacent to the New Canal. The shovel tests were excavated to a maximum depth of 30 cm, but in most instances this depth could not be attained because water and soil infilled each test before they could be excavated. Approximately 20 cm of water was present on the land surface. No cultural materials or features were observed in any of the tests.

Probing to a depth of 2 m on land and to 1 m in the water was undertaken at judgmentally selected locations to determine if deeply buried objects or features were present. Probing on land was primarily concentrated in areas where submerged brick was visible off of the bank. Solid contact was not encountered in any of these tests.

Four auger tests to 1 m depth were excavated (Figure 19). One test at the south end of the shell hash revealed shell in 10YR 7/3 (very pale brown) loose sand matrix to 25 cm below surface. Beneath this was a 5Y 5/1 (gray) loose sand with shell. A test at the north end of the shell hash revealed the same two strata. The two other auger tests were placed 20 m east of the above tests on the subsided land. Loose sand was observed to 1 m depth in both tests.

The locations of cultural and natural features and excavations were tied to five features (pilings and power line poles) near the pumping station (Figure 19) using an Hewlett Packard H/P 3810 Total Station. This is an infra red electronic distance meter (EDM) coupled with a twenty second theodolite. The instrument was set up near the bank of the canal on 16JE127. Readings were also taken of the submerged post and the oyster bar. The site map was created from these data.

The sandy bottom of the bay was visible near the shoreline because of clear water and low tides. These areas were visually inspected. Submerged areas with poor visibility were investigated with wire drag and by walking and feeling for features and artifacts. A broken upright post measuring approximately 5 x 20 cm and protruding from the bottom of the bay was detected in this manner. In addition, three large stones and submerged boards lying flat near the mouth of the canal were found. One of the stones was composed of a chert-like material. It is unknown if these were ballast stones or if they derived from the rip rap which is located along the bank northwest of 16JE127. The one chert-like stone clearly was not rip rap; the other stones were not removed from the bottom of the bay. The bottom of the bay near the board was examined with a 2 m long probe, but no buried features were detected. Finally, magnetometer survey was conducted within the canal adjacent to the site and bay (above). The only positive readings were in the vicinity of the post (Anomaly 4). Two badly corroded ferrous objects were recovered in this area.

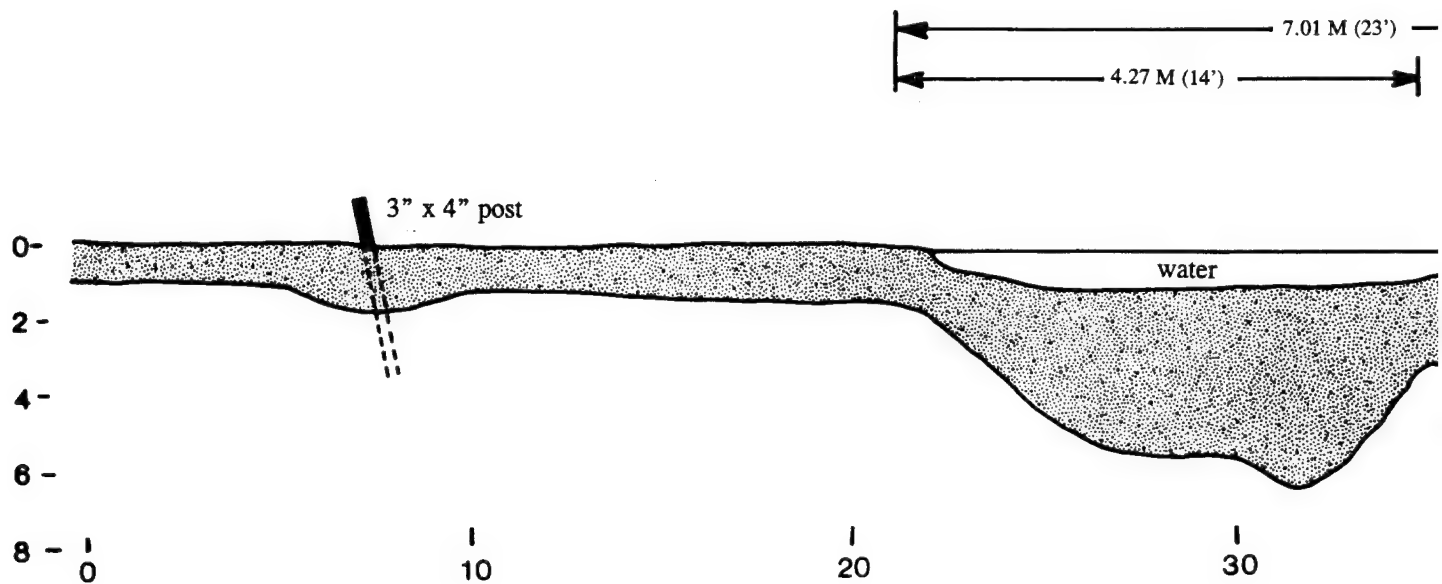
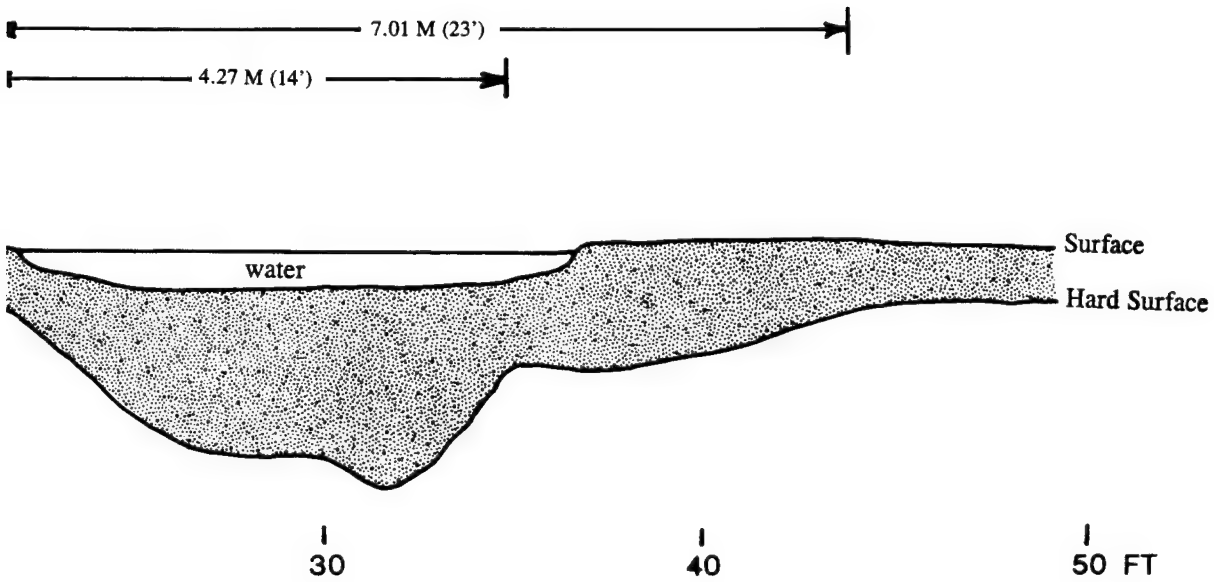


Figure 18. Cross-section of New (Plantation) Canal.

(2)



Cross-section of New (Plantation) Canal.

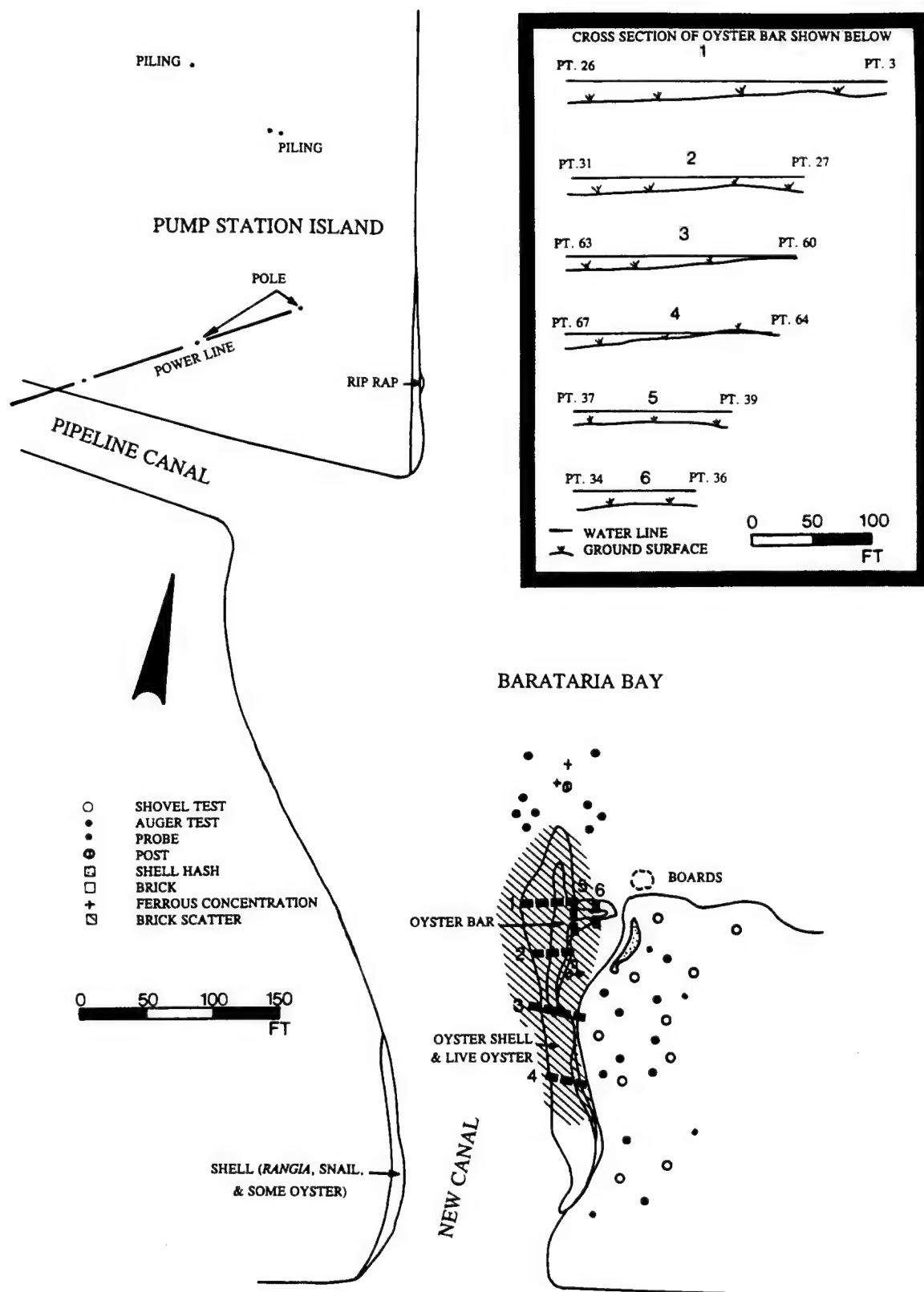


Figure 19. Site map of 16JE127.

Observation of the erosion processes at the site indicates that while the canal bank has been relatively stable, major erosion is occurring on the bay side of the site. The few artifacts that have been recovered have apparently not been transported any distance by wave action, but are largely eroding out in place. Ferrous objects were noted in the vicinity of the submerged post, and it is possible that other artifacts lie buried at the bottom of the bay near the bank.

Artifacts from 16JE127 are presented in Table 17. Few items were observed at the site, but the ceramics present all date to the early-to-mid-nineteenth century. Louisiana Wildlife and Fisheries personnel indicate that a wine bottle and ballast stone were also found at the site, but no other artifacts were mentioned. The collection was too small to attempt any statistical analyses. The paucity of artifacts is consistent with the interpretation of this locale as a pumping station.

No structures are shown on the historic maps of the island in this locale. An 1908 map (Coast and Geodetic Survey 1908) shows marsh land extending back from Barataria Bay. It appears that 16JE127 was situated on the northernmost extent of dry ground land. Given the fact that it appears that the primary function of the New Canal was plantation drainage, this may have been the location of a pumping station which drained the plantation fields. Such pumping stations are relatively common at the rear of the fields on Mississippi River plantations, and they are usually associated with brick scatters and/or masonry foundations for the pump(s). It should be noted in this regard that Phillipe Brugier evidently built a masonry "draining house" on the estate in 1830.

NRHP Evaluation. Site 16JE127 was mapped, the submerged areas were examined, and subsurface testing was conducted, but there was no positive archeological evidence of site function was found. Despite intensive investigations at 16JE127, few cultural features or artifacts were identified. The paucity of artifacts and features indicate that 16JE127 lacks further research potential. Therefore, the site is ineligible for nomination to the NRHP. No further work is recommended at the site.

Site Delineation, 16JE128

Prior to these investigations, 16JE128 was recorded as being located outside of the current project area. At the time the site was initially recorded in 1977, no *in situ* deposits were identified (Gagliano et al. 1979; LA State Site Files). During a subsequent visit to the site, Allen Saltus (personal communication 1995) recognized the potential for terrestrial cultural deposits, as well as submerged cultural features within the canal and Barataria Bay. Nonetheless, it was not anticipated that the site would extend into the current project area. Extensive erosion of the Barataria Bay shoreline has resulted in the exposure of cultural deposits where none had previously been observed. The scatter of artifacts along the bank of the Old Canal indicates that the site extends along the channel and into the project area. Site extent within the bay and within the Old Canal channel was not established.

Because of the shallow water, it was possible to visually inspect the bottom of the bay and the canal in the areas nearest to the shore. By walking submerged areas while feeling for exposed features and artifacts, additional cultural remains were identified in the areas of poor visibility. A mass of corroded barrel hoops located in an area that was formerly the edge of the canal was identified using the latter method. Similarly, a box-like feature composed of vertical boards and horizontal cross supports was found just off the bank. It contained butchered animal bone, olive wine bottle fragments, a sherd of blue transfer-printed pearlware, and corroded iron. Magnetometer readings indicated that additional ferrous materials are present in the submerged portion of the site. This was verified by walking slowly and carefully in the bay while feeling for features or objects. A number of ferrous concretions were found in this

Table 17. Artifacts from 16JE127.

Blue transfer-printed pearlware bowl fragment	1
Polychrome hand-painted whiteware saucer fragment	1
Lead-glazed redware	1
Olive demijohn base	1
Bone	1
Total	5

manner. Because the objects were amorphous and unrecognizable, they were redeposited where they were found following a brief examination.

The shoreline extending from the small channel to the confluence of the Old Canal and Barataria Bay was carefully examined to attempt to identify the origin of the scatter of cultural material. Ceramics were observed lying submerged in the canal, but no *in situ* deposits were observed along the majority of the bank. However, *in situ* cultural materials were identified in the area of the shell hash at the mouth of the canal.

Most of the present-day soil on Grand Terre is identified as Scatlake Muck (Chapter 2). However, it is likely that the soil was historically Sharkey silty clay loam, which has since subsided. A dense root mat of marsh grass is visible along the shoreline during low tide. In the area of the shell hash, a 15.2-30.5 cm thick dark silty clay humic zone underlain by a softer clay surface was observed below the root mass. This humic zone and clay may be strata of Sharkey silty clay loam exposed by erosion. During field investigations, artifacts were clearly observed eroding out of this humic zone. These included two paving tile fragments and ceramic sherds. Wave action, affected by wind patterns and currents, has been a major factor eroding the shoreline. During severe storms, the erosion process is intensified.

Standing water precluded shovel and auger testing of the terrestrial portion of the site. On most parts of the site west of the small channel there is 20 cm of water and dense marsh grass. The exceptions are two small areas of shell hash located along the shore and three inland hummocks. Investigations at the site were therefore concentrated at these few accessible areas. In addition, auger tests to a minimum depth of 1 m and to a maximum depth of 1.2 m were excavated in a single transect paralleling the Old Canal on the somewhat-drier land east of the small channel. All of the auger tests were negative.

The two areas of shell hash consisted primarily of a scatter of fragmentary *Rangia* with a few oyster shells. Intermixed with the shell were fragments of ceramics, bottle glass, pipe-stems, and cut animal bone. Investigations in these areas were limited to surface examination because of the disturbed nature of the deposits. Wave action had rolled shell and artifacts to form two low ridges approximately 1 m wide paralleling the shoreline.

The hummocks supported a ground cover of dense grass and brush approximately 1-1.5 m tall. Judgmentally-placed probing was utilized on the dry hummocks and in the areas of standing water surrounding the rises to determine if buried cultural materials were present. Hummock 1 is approximately 20 cm high and measures 18.72 x 4.95 m. A 2 m probe was used to test the hummock and the subsided area extending approximately 5 m from the rise. A total of 15 probe tests were placed, and none of these encountered solid contact.

Hummock 2 is approximately 20 cm high and measures 9.61 x 4.63 m. A 2 m probe was used to test the hummock and the subsided area extending approximately 5 m from the rise. A total of 12 probe tests were placed, and none of these encountered solid contact.

Hummock 3 is about 20 cm high and measures 10 x 4 m. A 2 m probe was utilized to test the hummock, and an area of solid contact was defined in the highest portion of the rise. A shovel test was excavated here. A brick concentration, a probable horse molar, and an amorphous metal fragment were found at 16 cm below the ground surface. A lens of *Rangia* that extends approximately 40-54 cm below the ground surface was encountered below the cultural material. An auger test was excavated within the shovel test in order to determine if additional cultural deposits were present below the *Rangia*. Loose gray sand was observed below the shell. The test was terminated at a depth of 135 cm below surface because of infilling.

A site map was prepared and shot in using the EDM. The points that were selected were two fence posts, the shovel test on Hummock 3, and an iron bar at the edge of the shoreline. The points were tied in to the U.S. Army Corps of Engineers baseline. The site map shows the shoreline, the shell hash, the locations of hummocks, and the fence posts located at the site.

No artifacts were collected at 16JE128. However, transfer-printed, hand-painted, shell-edged, annular pearlwares; creamware, black bottle glass; kaolin pipestems; gunflints; and butchered animal bone were all observed redeposited on the shoreline. In addition, numerous surface collections from the site made by Wildlife and Fisheries personnel were available for examination on the island. Artifacts in their collections consist primarily of ceramics, with smaller quantities of glass present. The vast majority of ceramics are pearlwares and include transfer-printed, hand-painted, shell-edged, and annular decorative types. Creamwares are present, but in lesser quantities. All of the creamware that was observed in the Wildlife and Fisheries collections was undecorated. Whitewares are apparently virtually non-existent at 16JE128. A similar range of ceramic artifacts was collected at the site by Allen Saltus in 1989 (Table 18; Figures 20-23). Thus, the collections all appear to date to the period ca. 1800-1820, although it should be noted that Mr. Saltus recovered a few sherds of tin-enameled earthenware from the site. While it is not uncommon to find faience on sites dating to the first decade of the nineteenth century (Yakubik 1990), these sherds could indicate activity in the area predating Laffite's advent in 1808.

Sherd size in the collections examined tends to be relatively large, which would be consistent with the discard of large numbers of damaged vessels that might be expected in a warehouse situation. Similarly, the large quantities of butchered bone at 16JE128 may be interpreted as the result of dumping spoiled meat. In addition, the wide variety of ceramics present at the site also is consistent with a warehouse. Collections made by Allen Saltus yielded a total of 35 different shell-edged rim patterns. Thus, the artifact assemblage from the site does not contradict the interpretation that the site is the remains of the Baratarians' settlement.

Site size and site features also supports the interpretation of the site as Laffite's settlement. The site formerly may have been much larger than that area observable today. This would have provided ample area for "40 houses of different sizes, badly constructed, and thatched with palmetto leaves" (Cusachs 1919:425) that were said to have been located at Laffite's settlement. The presence of these structures, associated outbuildings, and other features may explain the numerous wooden boards of various sizes protruding from the bottom of Baratania Bay. While none of the features were definitely associated with a dock or warehouses, the proximity of 16JE128 to the canal suggests the location was probably selected because the channel was an integral part of an inter-island transportation system. This location also facilitated goods being moved off the island for storage at a central location until they could be sold.

Settlement along the north shore of the bay would have had strategic advantages for the Baratarians. Goods were sold on Grand Terre, and slaves were taken up Bayou Lafourche and sold at auction (Chapter 4). All supplies also had to be brought to Grand Terre from the mainland or from Grand Isle. An inlet on the Baratania Bay side of the island would have afforded a calm anchorage for the smaller watercraft that could cross the shallow bay. At the same time, it is possible that other parts of the island may have been inhabited by the Baratarians. The ridge paralleling the Old Canal, which extends outside of the current study area, could have supported several structures. The presence of brick fragments and other cultural materials on Hummock 3 suggests that areas of higher elevation along the canal were utilized.

Table 18. Artifacts collected at 16JE128 by Allen Saltus in 1989.

Glass			277
blue green			38
dark green			108
green			118
clear			9
brown-amber			3
cobalt blue			1
Ceramics			758
Coarse earthenware			80
Pearlware			
undecorated			116
shell-edged			121
polychrome decorated			104
blue transfer-printed and hand-painted			198
black transfer-printed			2
Creamware			
undecorated			100
annular			1
Greenish tint glaze			10
Tin-enameled earthenware			5
undecorated			3
blue hand-painted			2
Porcelain			3
White salt-glazed stoneware			1
Unidentified			3
Tile			1
Pipe bowl fragment			1
Brick			5
Brick fragment			1
Terre cotta			1
Bone			116
Wood			5
Shell			2
Iron			33
Brass			1
Lithics			4
Slate			1
Arms flint			1
Unidentified			2
TOTAL ARTIFACTS			2235

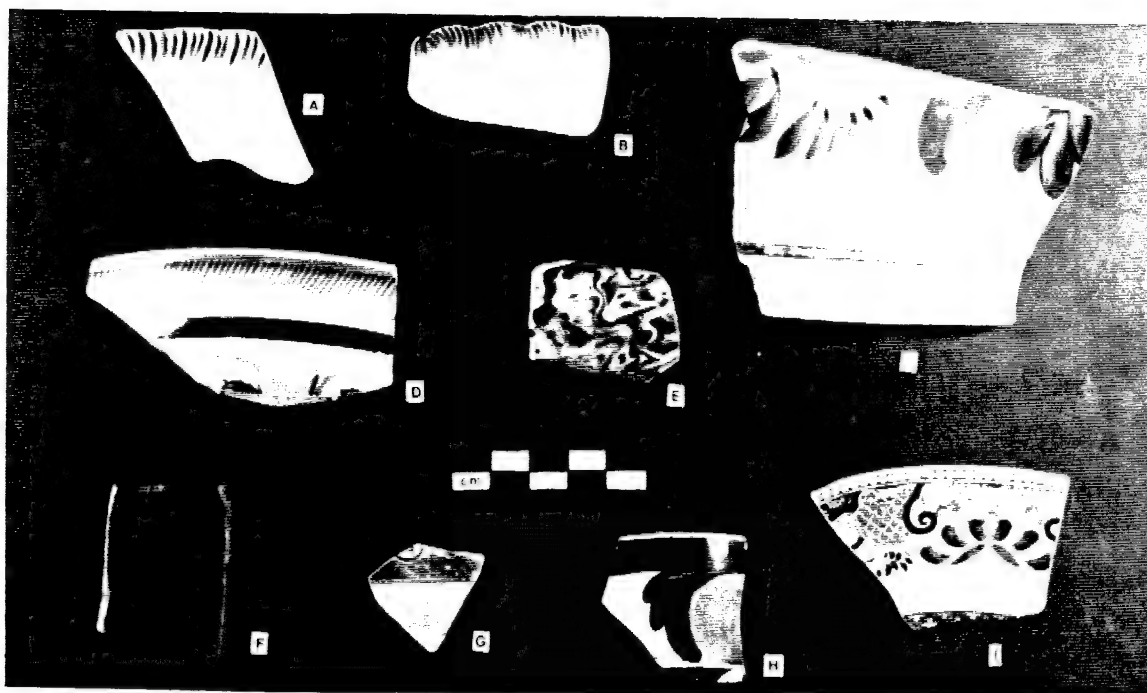


Figure 20. Ceramics from 16JE128. A) green shell-edged pearlware; B) blue shell-edged pearlware; C) polychrome hand-painted pearlware; D) finger-painted pearlware; E) marbled earthenware; F) brown-glazed redware; G) gray salt-glazed stoneware, blue handpainting between incised lines; H) blue hand-painted pearlware; I) blue transfer-printed pearlware.

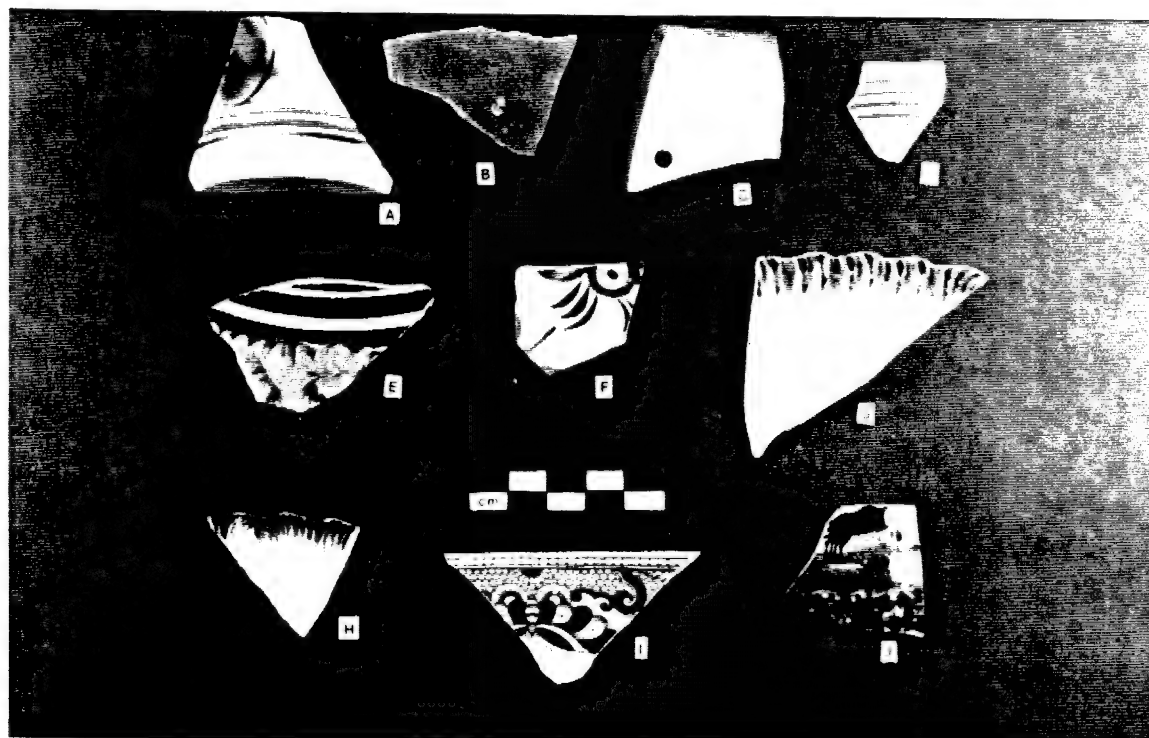


Figure 21. Ceramics from 16JE128. A) gray salt-glazed stoneware, blue handpainting between incised lines; B) gray salt-glazed stoneware; C) redware, white interior slip and lead glaze; D) annular pearlware; E) finger-painted pearlware; F) polychrome hand-painted pearlware; G) green shell-edged pearlware; H) blue shell-edged pearlware; I-J) blue transfer-printed pearlware.

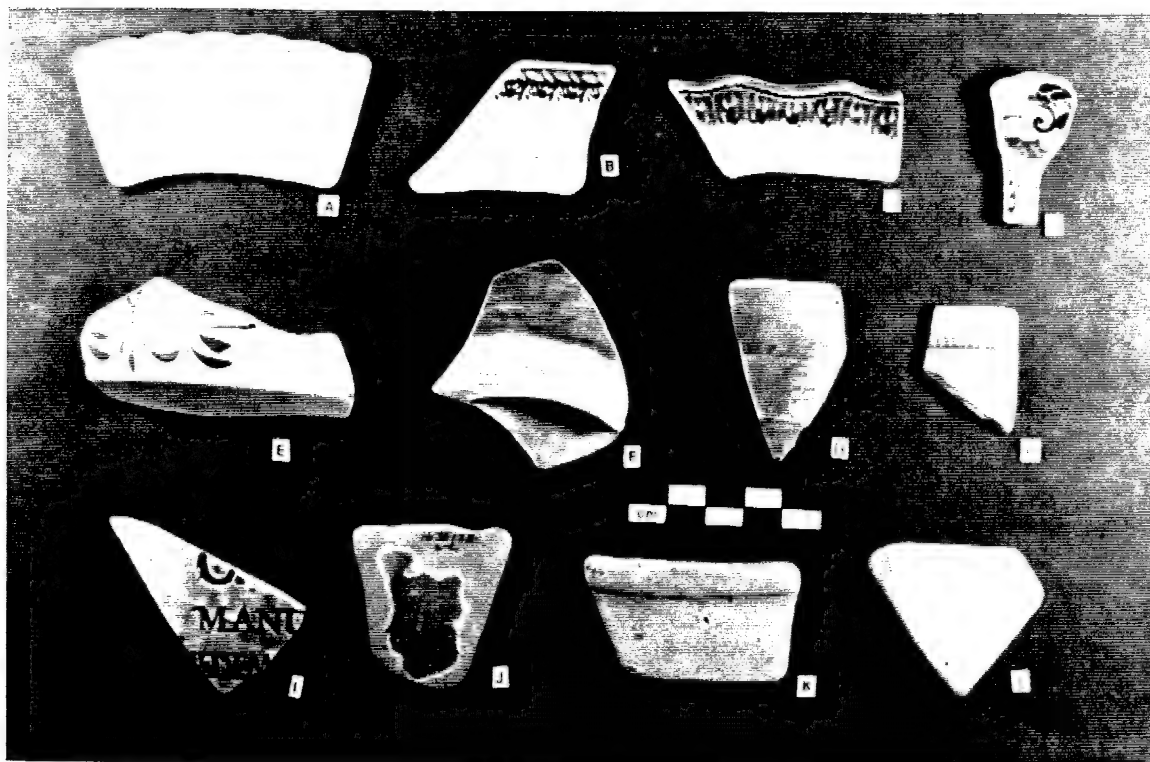


Figure 22. Ceramics from 16JE128. A) green shell-edged pearlware; B-C) blue edged pearlware; D) blue transfer-printed pearlware; E-F) blue hand-painted pearlware; G) mocha pearlware; H) annular pearlware; I) salt-glazed stoneware; J) Saintonge White-Slipped and Green-Glazed Pink Earthenware; K) eroded, unidentified earthenware; L) Pink-Slipped and Lead-Glazed Redware.

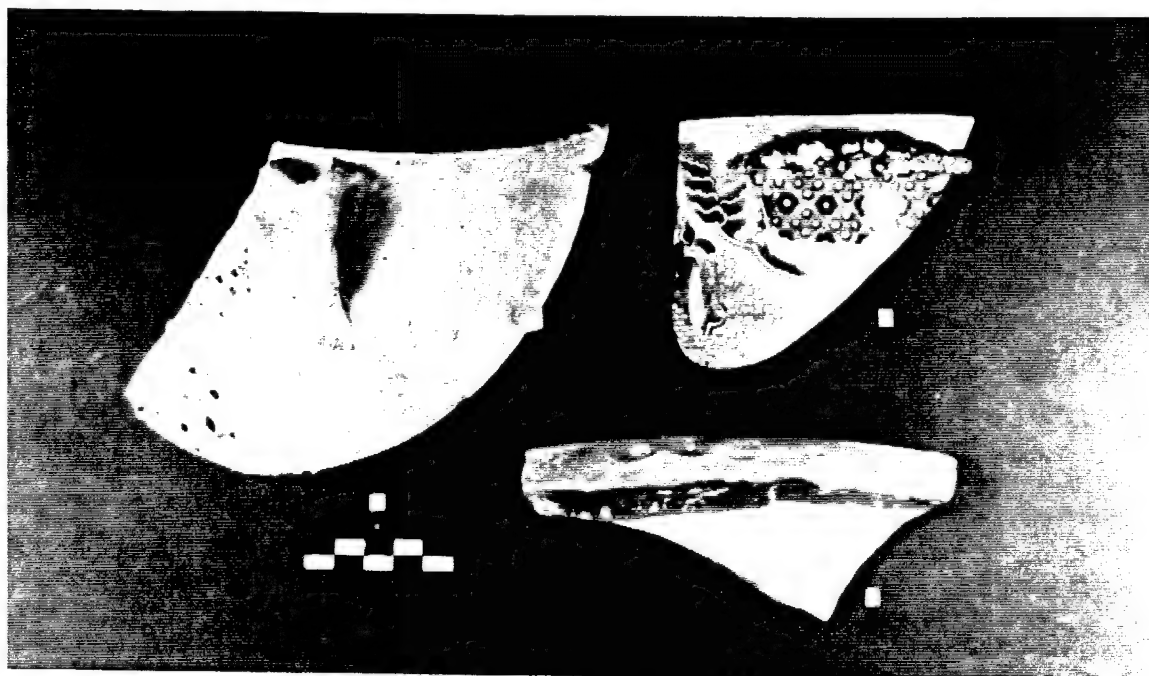


Figure 23. Ceramics from 16JE128. A) eroded, unidentified earthenware; B) blue transfer-printed pearlware; C) lead-glazed redware.

Since this ridge is located outside of the project area, no augering or probing was performed to confirm or disprove this hypothesis.

NRHP Evaluation. Limited subsurface examination of 16JE128 revealed cultural features on at least one hummock. Wooden posts, planks, and an intact, box-like feature were observed in the bay off of the bank. Observation of the bank along Barataria Bay revealed that *in situ* artifacts and animal bone are eroding out of the subsurface levels. Thus, the site possesses the quality of integrity, despite continued erosion and subsidence. Artifacts, features, and site location strongly suggest that the site could have been associated with the Laffite warehouses/settlement. As such, the site provides an unprecedented opportunity for the examination of contraband trade.

Artifacts present on the site appear to indicate the “treasure of Jean Laffite” was not gold, but the pearlware, wines, and foodstuffs he provided to an ill-supplied region. An inventory of goods seized by the military forces on Grand Terre during 1814 includes a variety of clothing, foods, glass tumblers, and demijohns (Chapter 4). The archeological assemblage, in contrast, consists primarily of ceramics. Also present are black glass wine bottle fragments, animal bones, gunflints, and kaolin pipestems. This would seem to suggest that the goods seized in 1814 were not necessarily representative of the total range of materials that came through the island. While it is possible that some of the artifacts may in fact represent subsistence refuse of the Baratarians, the nature of the collection argues strongly that it in fact derives from warehouse discard.

The site has the potential to address the theme of Submerged Archeological Sites identified in Louisiana’s Comprehensive Archeological Plan (Smith et al. 1983:252). Although more attention was given to shipwrecks in the Plan, the value of submerged sites resulting from erosion and subsidence is recognized. Limited investigations of 16JE128 have revealed that submerged posts and boards associated with structures, wells, and other features are preserved. While the site was terrestrial, the cultural deposits, including these features, were protected. As the result of pipeline canal construction, subsidence, erosion, and hurricanes, the features are now exposed *in situ* on the bottom of Barataria Bay. Investigation of these features and deposits could provide a wealth of information on the organization and layout of the settlement.

Site 16JE128 can also supply data to address the research goal of the examination of the archeological nature of service centers (Smith et al. 1983:255). The plan states that little, if any, work has been accomplished on trading posts and other antebellum service centers. It appears that the site was the location of Laffite’s warehouses. The Baratarians captured ships and sold the captured consumer goods and slaves to residents of Louisiana. Documentary evidence indicates that at least a portion of the goods were taken to Grand Terre for storage until they could be redistributed (Chapter 4). Investigations at 16JE128 combined with data from contemporary plantation and urban sites may be utilized to help reconstruct the regional economic network.

The presence of two small paving tile fragments at 16JE128 also suggests that the Old Canal adjacent to the site was used to transport goods to and from the building complex at what later became Forstall Plantation. It is possible that expanded archeological investigations at the 16JE128 would result in the identification of features associated with the plantation. This information would be valuable for gaining added insights on the economic system of a nineteenth-century barrier island sugar cane plantation.

Then too, 16JE128 is associated with Jean Laffite. Jean Laffite was undoubtedly a criminal, but he is arguably Louisiana’s most infamous criminal. Archival resources indicate that Laffite set up a smuggling establishment on “Barataria Island” in 1808 (Chapter 4). His

illegal commerce was based here until 1814. Although other pirates and privateers operated during the nineteenth century, the involvement of Jean Laffite and the Baratarians at the Battle of New Orleans contributed to their renown, regardless of the extent to which their contributions have been romanticized. Almost 200 years later, many people are at least familiar with the name of Jean Laffite.

Thus, 16JE128 has the potential to yield information important to history. It is also associated with the life of Jean Laffite, a person significant in our past. 16JE128 is therefore eligible for nomination to the NRHP under both Criteria B and D.

Site Delineation, 16JE129

16JE129, the Forstall Plantation site, is located on the beach of the Gulf of Mexico, approximately in the center of the island (Figures 24 and 25). The site has been seriously impacted by erosion. The sugar house foundation, historically located .25 km inland from the Gulf shore, is today eroding into the Gulf. Most of the land inland from the beach has subsided and is covered with marsh grasses. Dunes, hummocks, and other areas of slightly higher elevation support low brush. Ponds of various sizes are present on the site (Figure 26). One pond, located northwest of the sugar house, may have been excavated to provide a fresh water reservoir for the steam boiler. A distinct berm of soil along the north bank of the pond is .5 m higher than the surrounding ground surface. This berm appears to be the result of the excavation of the pond.

The remains of the masonry sugar house foundations are located at the edge of the shoreline and extending into the Gulf. Dense brick and brick rubble surrounds the structure. To the west and to the east of the sugar house foundations are vertical wood planks which are partially exposed on the beach at low tide when the surf is calm. These appear to be the remains of structure walls, or, more likely, fencelines. Boards and posts that may have been associated with a canal landing are located north of the sugar house and adjacent to the west bank of the New Canal. These are the only surficial features present at the site. All were mapped and documented to the extent possible given field conditions and are described below.

Artifacts were found scattered among the bricks from the sugar house. The artifacts were washed onto the beach as the result of the re-working of *in situ* deposits immediately offshore in the Gulf. This process was observed during field investigations. Re-deposition of artifacts appears to be influenced by wave duration, size, and angle to the beach; by artifact size, shape, and density; and by the attitude of the beach face, obstructions, and sediment type. Generally, the movement of artifacts is from west to east. Artifacts being eroded from areas west of the sugar house are trapped within the foundation. It should be noted that the quarters at Forstall were located to the west of the sugar house (Figures 4 and 6). Thus, given the pattern of redeposition of the artifacts on the shore, it seems likely that much if not most of the material collected from the sugar house vicinity are associated with the African Americans who formerly lived on the estate. A grab surface collection of diagnostic artifacts was made at 16JE129 (below).

Because artifacts were generally trapped within the sugar house foundations, little cultural material was noted east of these features. However, a few ceramic sherds were found as far away at .5 km east of the sugar house.

Subsurface testing at 16JE129 included the use of a variety of techniques. Auger tests, shovel tests with auger tests excavated in the base, and shovel tests with soil corer tests excavated in the base were placed at 20 m intervals across the site in areas that were not inundated. Whenever cultural materials were encountered, the testing interval was reduced to 10 m. Initially, auger tests were excavated to depths of 1.0 to 1.25 m, but subsequent tests were



Figure 24. 16JE129. view from south.



Figure 25. 16JE129. view from west.

excavated to 2 m to determine if cultural materials and features were buried at greater depths. In addition, judgmentally-placed auger tests were excavated in several hummocks and at the presumed locations of former standing structures. The latter were projected from map evidence based on distance from the sugar house.

A total of 73 shovel tests were excavated on the site to a depth of 50 cm. A 1 m auger was excavated in the base of eight of these tests, a 2 m auger test was excavated in the base of eight of these tests, and 1 m soil corer test was excavated in the base of 30 of these tests. Shovel testing alone and metal detector sweeps proved to be ineffective because of deposition, subsidence, and the height of the water table.

Intensive augering was most productive in determining the horizontal and vertical extent of the cultural deposits (Figure 26). A total of 56 auger tests were excavated. Thirty-two of these tests were excavated to 2 m depth.

Eight tests were positive for cultural materials. Five of these tests were located on or immediately adjacent to the E280 grid line (Figure 26). All of these were excavated to 2 m depth:

N110 E280: 10YR 5/3 (brown) loose sand containing small shell fragments extended to a depth of 40 cm below surface. Beneath this was a 10 cm layer of 2.5Y 3/2 (very dark grayish brown) sandy loam. A 2.5Y 2/0 to 2.5Y 3/2 (black) sandy loam was observed at 50-70 cm below surface. This graded into a 10YR 3/2 (very dark grayish brown) sandy loam between 70-85 cm depth. Below 80 cm depth was a 2.5Y 3/2 to 2.5Y 4/2 (grayish brown to black) sand. Tiny brick and mortar fragments were observed between 145-160 cm depth.

N130 E280: 5Y 3/1 (very dark gray) sand was the uppermost stratum observed. The soil graded to a 5Y 3/2 (dark olive gray) sand at 45 cm below surface. An olive bottle glass fragment, brick, and mortar were collected at 80 cm. Tiny brick and mortar fragments were also observed at 100 cm and 125 cm below surface.

N130 E290: A 2.5Y 5/2 to 2.5Y 4/2 (grayish brown) sand was present to 80 cm below surface. Beneath this was a 5Y 3/2 (dark olive gray) silty sand. A fragment of amorphous metal and a bone broken into three fragments were collected at 140 to 150 cm below surface. Fragments of oyster shell, wood, and brick were also noted at this depth. Tiny brick fragments were observed to a depth of 175 cm below surface.

N160 E280: The uppermost stratum was a 5Y 3/1 (very dark gray) loose sand intermixed with a 5Y 2.5/1 (black) fine sandy loam. This loam was not observed below 20 cm. The 5Y 3/1 sand became more compact below 150 cm. Tiny fragments of black and clear glass were collected at 90 to 100 cm below surface. Brick, mortar, oyster shell, and carbonized and decayed wood were also noted at this depth.

N170 E280: Soil within this test was a 5Y 3/1 (dark gray) sand. One small brick fragment and two marsh snail shells were noted at 160 cm.

It should be noted that all tests bracketing the above positive tests were negative for cultural material.

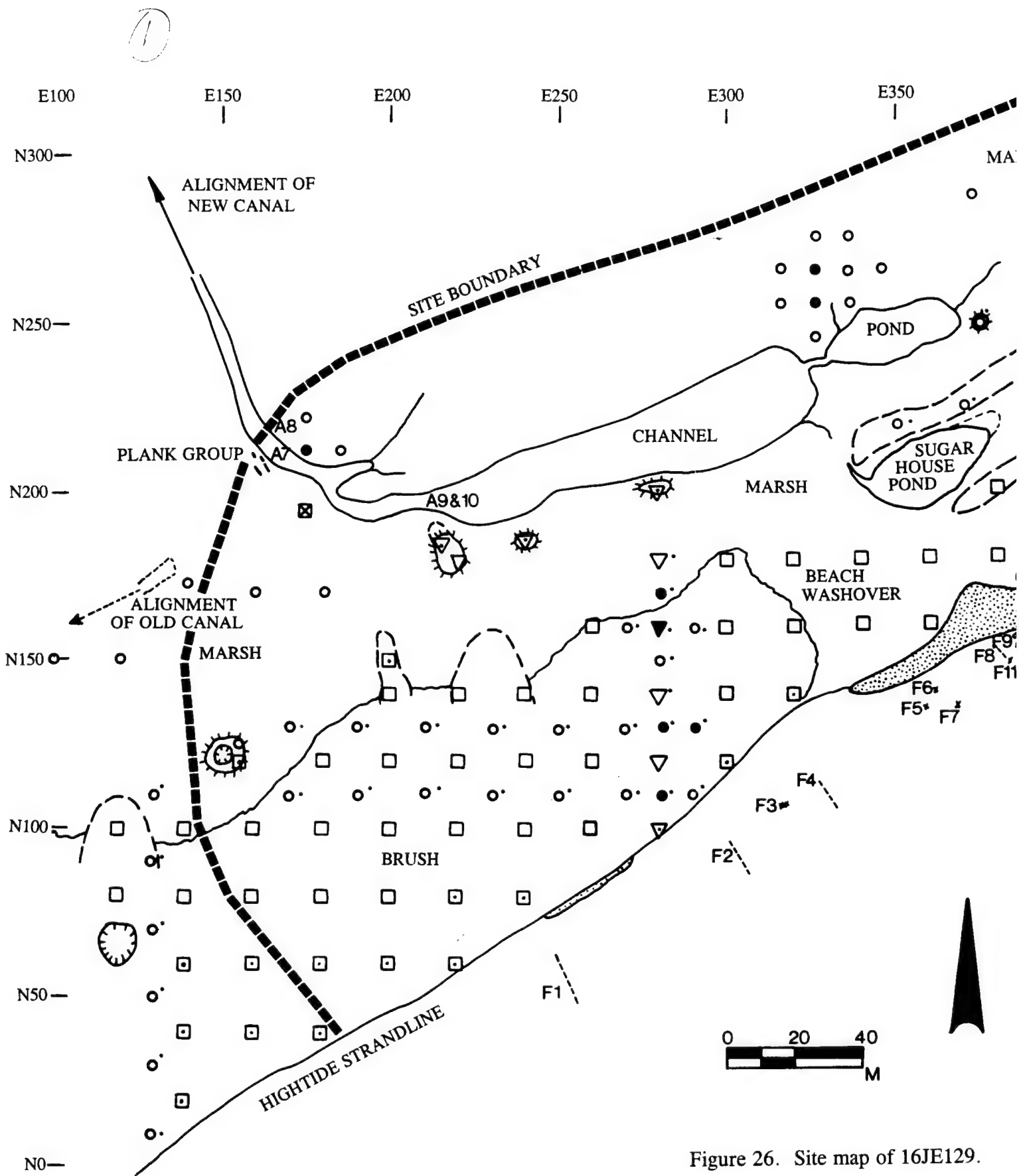


Figure 26. Site map of 16JE129.

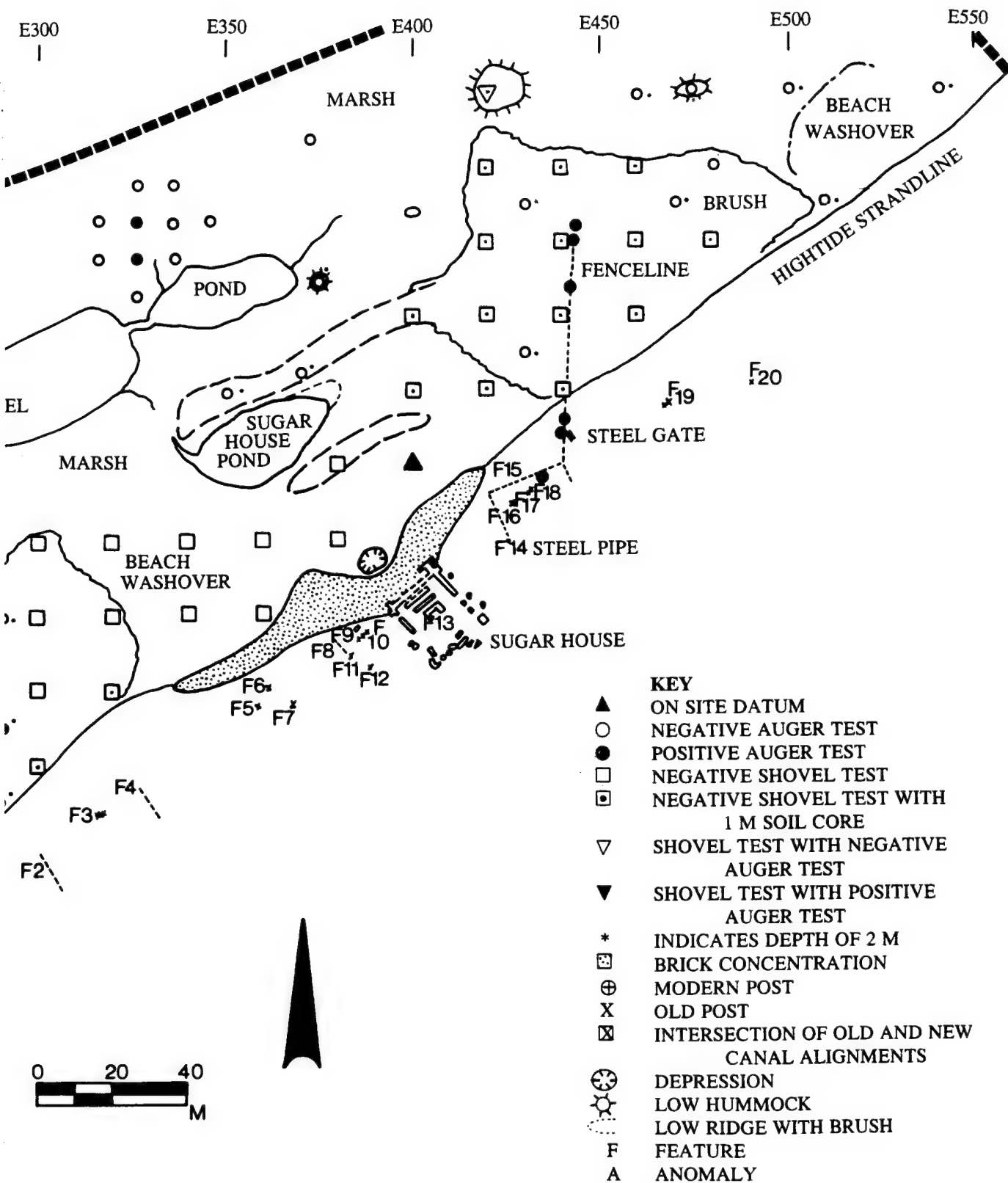


Figure 26. Site map of 16JE129.

Two additional positive tests were excavated north of the ponds located northwest of the sugar house:

N256 E326: Soil within this test was a 2.5Y 3/2 (grayish brown) sandy loam. Several small brick and shell fragments were observed between 80-90 cm below surface.

N266 E326: Soil within this test was a 5Y 3/1 (very dark grayish brown) silty sand which graded to a clayey sand below 25 cm. Brick, wood, oyster, and *Rangia* were noted between 75-95 cm below surface.

Finally, a positive auger test was excavated at N213 E175. Soil within this test was a 2.5Y 3/2 (very dark grayish brown) silty wet sand to 25 cm below surface. Beneath this was a 5Y 3/1 (very dark gray) wet silty sand. Brick and mortar fragments were observed at 80 cm below surface in this test. Additional tests surrounding these positive tests were negative for cultural material.

Depths of the cultural deposits found within auger tests ranged from 75 to 175 cm below the surface. Cultural materials are deeply buried near the shore where beach overwash has accumulated, as well as in the northern part of the building complex, where subsidence has been considerable. No other tests in this area were positive for cultural material.

The site was mapped with compass and tape. The locations of excavations, and natural and cultural features such as hummocks, canal channels, and ponds all were recorded. Twelve points were selected and referenced to the Corps of Engineers baseline. Geo-reference of grid coordinates were established for the sugar house foundation, submerged wooden boards and posts, site data, magnetic anomalies, boards associated with the possible landing on the canal, and two auger tests. Locational data were tied to two (FL-4 and FL-5) of the U.S. Army Corps of Engineers Grand Terre Monuments on the NOD baseline and their locational data as noted in the New Orleans District Traverse Computations, North American 1927 Datum, Louisiana South Zone, dated October 24, 1991.

Documentation of Features. The remains of the sugar house were mapped in detail (Figure 27). It was impossible to draw detailed plans of those features located farthest out in the water because of the Gulf surf (Figure 28). However, sketches of these features and their relationship to the rest of the complex were drawn (Figure 27), and all of the features were photographed. In addition, selected profiles of individual masonry features were drawn and photographed.

The visible part of the foundation measures approximately 18 m east/west by 19 m north/south. The most intact portions of the structure include the north, west, and east walls and a freestanding foundation interpreted as an engine mount (Figures 28 and 29). The south end of the structure has been almost completely destroyed by erosion and wave action (Figure 28). Individual brick features comprising the remains of the structure are described below.

At the southwest corner of the sugar house are two semi-circular foundations that likely supported open kettles (Figures 30 and 31). These kettle settings were commonly referred to as a battery or as a "Jamaica train." The Jamaica train consisted of four to six open kettles or cauldrons in which the juice was successively heated to the point of crystallization. Typically, the kettles were built above a flue in a masonry setting, with a furnace at one end and a smokestack or chimney at the other. The first and largest kettle, or *grande*, was located furthest from the furnace firebox. The largest kettle was about 72 inches in diameter (Sitterson 1953:141). The water in the cane juice was evaporated for a time in the *grande*,

and then the syrup was ladled into a succession of smaller kettles until evaporation was complete. A highly variable proportion of the cane juice would become crystallized sugar. This occurred in the last and smallest kettle, the "teache" or "tyche," which was usually of copper or cast iron and 48 to 54 inches in diameter. The dimensions of Jamaica trains varied with the size and number of kettles used, but they were typically in masonry settings of 30 to 40 feet in length and 7 to 8 feet wide (Couper 1831:315-316; Daniel et al. 1980:Figure 15; Sitterson 1953:141).

The broken setting at 16JE129 may have been for the *grande* or another large kettle. The interior diameter of the brick feature may have measured as much as 2 m. Because so little of the southern portion of the structure was intact, the number of kettles and their orientation within the sugar house could not be determined.

The foundation interpreted as a steam engine mount is located near the north wall of the structure. It is one of the more massive features preserved at the sugar house (Figure 32). On the top of the feature are a series of square apertures that extend vertically through the foundation to connect with additional apertures located at the base of the mount (Figures 32 and 33). There are 14 apertures along the south edge of the mount and six along the north edge. Long, iron bolts secured through these apertures fastened the engine to the foundation. An iron rod protrudes from one of the top apertures; this appears to be the only bolt still associated with the mount.

Similar construction with bolts extending through foundations was observed at the Ashland Plantation sugar house (Maygarden et al. 1994). These foundations were associated with the mill and the steam engine. Also, Pendergast (1982:Figure 3b) shows identical apertures with wrought-iron bolts used to anchor a mill.

The sugar house steam engine drove the mill and ancillary machinery. Sugar house engines were usually set on raised brick foundations to allow for the large flywheels that were required to ensure regularity of motion in the engine's movements. The axle of the reciprocating beam at the top of the engine was usually affixed to an iron frame raised on cast-iron columns. The entire apparatus might stand 30 feet tall from the level of the floor (Weissenborn 1861:Plate I). Other parts of the mechanism, such as pump pistons connected to the vertical rods of the reciprocating beam, might also be located below the level of the engine mounting on the top of the brickwork, or on the level of the engine frame.

South of the engine mount is a masonry feature that was probably the setting for the mill (Figure 32). The foundation is U-shaped, and the base of the U faces the engine mount. A bolt aperture was observed in the northwest corner of this feature.

The purpose of the mill was to extract as much liquid from the cane as possible, typically by passing the stalks through cylindrical rollers, on the same principle as wringer washing-machines. In the earlier days of the Louisiana sugar industry, animal-powered mills with vertical arrangements of rollers had been the rule, but by 1822, steam-powered mills with horizontal rollers had begun to appear (Sitterson 1953:140). The sugar cane was fed to the mill in three- or four-foot sections via the cane carrier or conveyor. If necessary, sugar cane brought in from the fields was placed in a shed to protect it from the weather until it could be milled. It is possible that some of the wood alignments west of the sugar house mark the locations of sheds where sugar cane and fuel were stored.

The open kettles and steam boilers required very large amounts of fuel. Over two cords of wood were required to produce a hogshead of sugar in open kettles (Aime 1878:54-55). It is possible that the fibrous stalk material emitted from the mill, called megass or bagasse, was used as fuel at 16JE129. The bagasse was allowed to dry under a shed and then

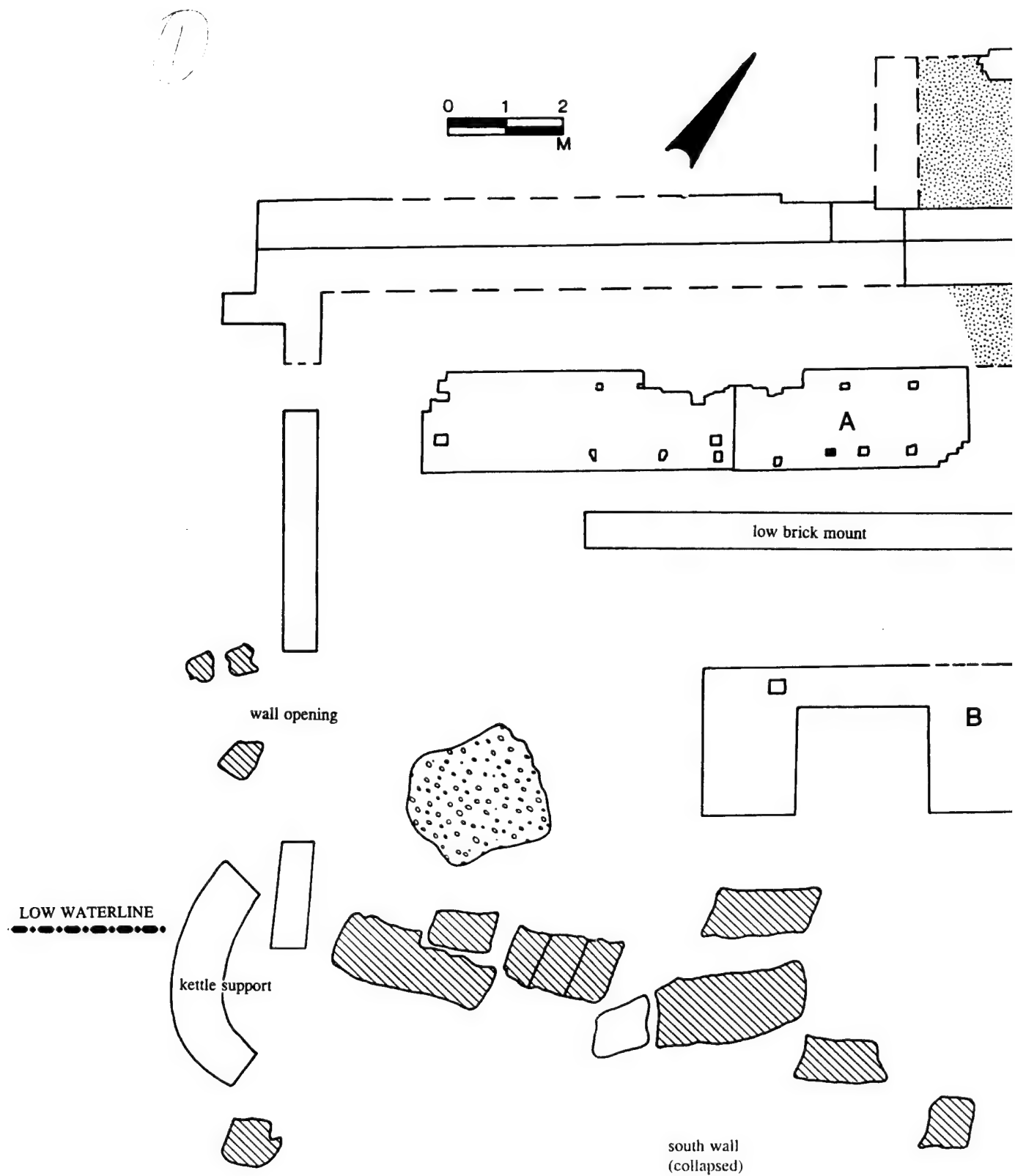
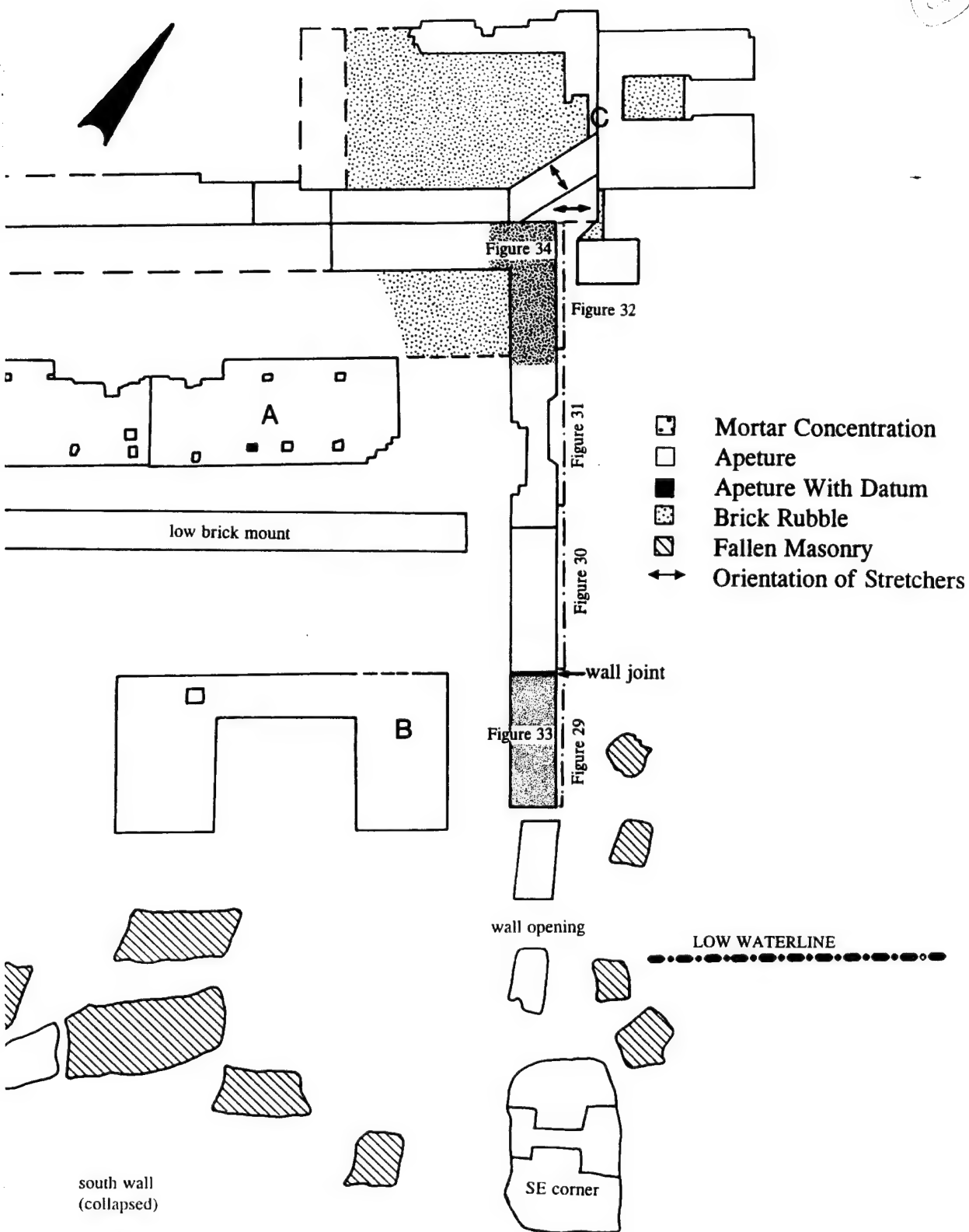


Figure 27. Planview of the sugar house, 16JE129. Southern, collapsed feature. Approximate scale.



house, 16JE129. Southern, collapsed features sketched in at

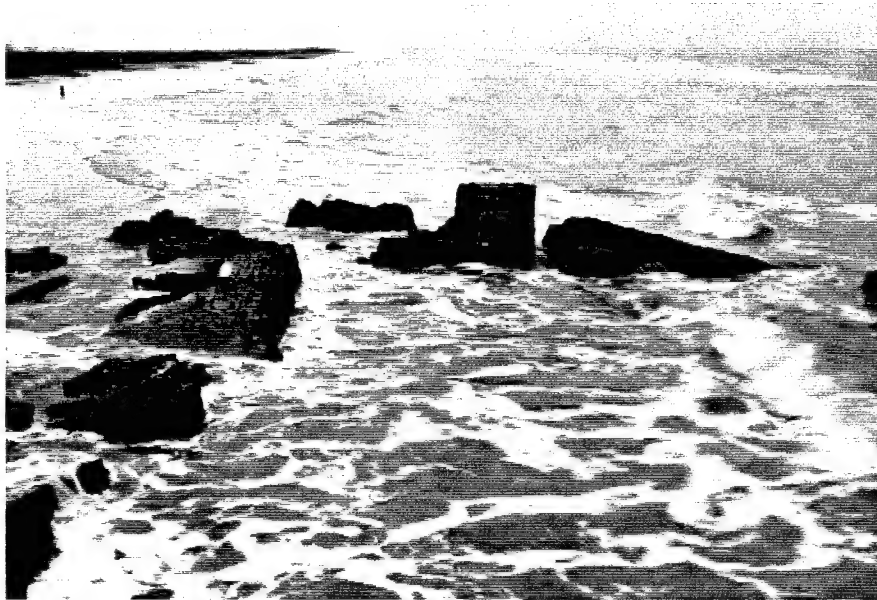


Figure 28. Southernmost sugar house foundations, 16JE129, view from west.



Figure 29. Sugar house foundations, 16JE129, view from south.

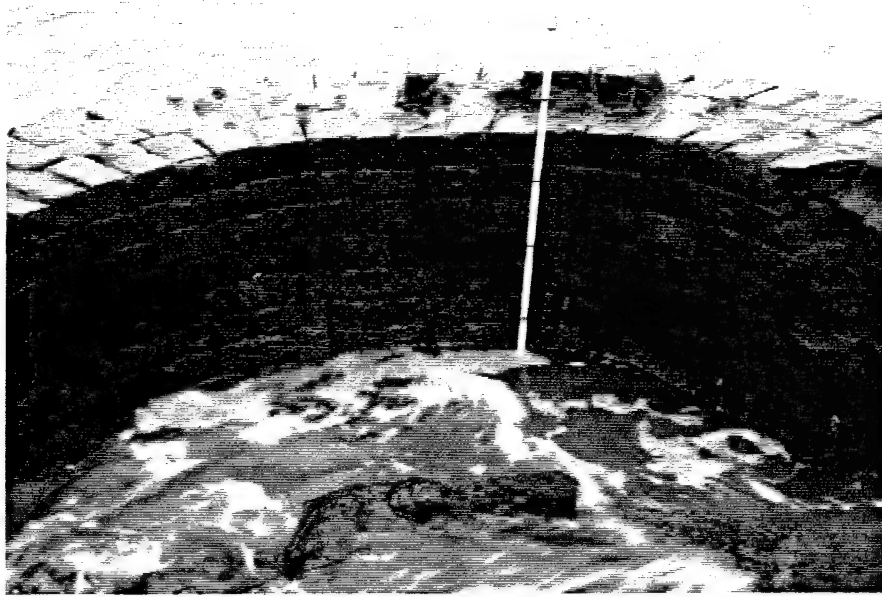


Figure 30. Kettle setting, sugar house, 16JE129.



Figure 31. Detail of masonry, kettle setting, 16JE129.



Figure 32. Profile of engine mount showing apertures at base, sugar house, 16JE129.



Figure 33. Bolt aperture, engine mount, 16JE129, sugar house.

was burned in the sugar house furnaces. It was also fed to cattle. After 1850, the development of bagasse burners, some utilizing blowers or more complex firebox designs, allowed undried bagasse to be burned (Sitterson 1953:140). One fragment of bagasse slag was noted at 16JE129.

The east wall, which was one of the more structurally-intact features, was profiled (Figures 34, 35, 36, and 37). Plans of the top of the south and north ends of the wall were also drawn (Figures 38 and 39). The locations of the plan and profile sections are shown in Figure 27. As shown in Figures 34-37, the brick work is somewhat irregular, and consists almost exclusively of stretchers along the interior surface. Little effort appears to have been expended to insure that the bonds were regularly aligned. The lower part of the feature is five bricks in width, and the upper portion is four bricks in width. The lower portion is likely the now-exposed foundation of the structure, while the four-brick-wide courses are the remains of the actual walls of the structure.

The east wall has two openings distinguished by structural breaks and by non-bonded construction. The most recognizable aperture is located near the northeast corner (Figure 36). Although much of the brickwork has been dislodged, the remaining masonry suggests there was an arched opening approximately 1 m high. At 1.8 m south of this archway, a narrow (35 cm) opening in the wall was closed with brick (Figures 35 and 40). The height of this opening could not be determined. Overbuilding such as this is fairly typical of nineteenth-century Louisiana sugar houses (Maygarden et al. 1994). The function of these openings is uncertain.

A masonry foundation located in the northeast corner of the sugar house at 16JE129 and near the engine and mill mounts appears to be the remains of the boiler firebox (Figure 33). A portion of this foundation appears to be buried under brick rubble and sand. The probable firebox foundation is juxtaposed to but not bonded with the walls of the sugar house. In addition, the sugar house has a layer of mortar on the exterior wall separating it from the firebox foundation. Thus, the boiler appears to have been located in a separate structure immediately adjacent to but detached from the sugar house. This arrangement is consistent with the three boiler settings observed at the Ashland Plantation sugar house (16AN26) (Maygarden et al. 1994). A separate building was probably used for safety, since the boilers could explode, and to reduce the exposure of the workers to the intense heat generated by the firebox and boiler.

The layer of mortar between the sugar house and the boiler firebox suggests that the two structures were not only built separately, but at different dates. As noted in Chapter 4, Brugier, a mason, was contracted to work on the Forstall sugar house in 1830. The sugar house was clearly extant by this date, since his claim noted that Brugier "prolonged the sugar house fifteen feet by thirty-nine..." Among other tasks, he apparently constructed a boiler setting. It is possible that the above firebox was part of the setting which Brugier constructed.

Sugar house boilers were heated with wood or bagasse. With the expense of wood, the large amounts required for sugar processing, and the inconvenience of transporting it from the mainland to 16JE129, bagasse was probably utilized as fuel whenever possible. As noted above, bagasse slag was observed near the sugar house

While the majority of the brick rubble surrounding the sugar house was common brick, fire brick was observed. All brickwork exposed to direct contact with the hot gases of the furnace was constructed of refractory brick or fire brick. The remainder of the brickwork used to construct the furnaces and associated features was common brick. No firebrick was observed *in situ* in any of the foundations.

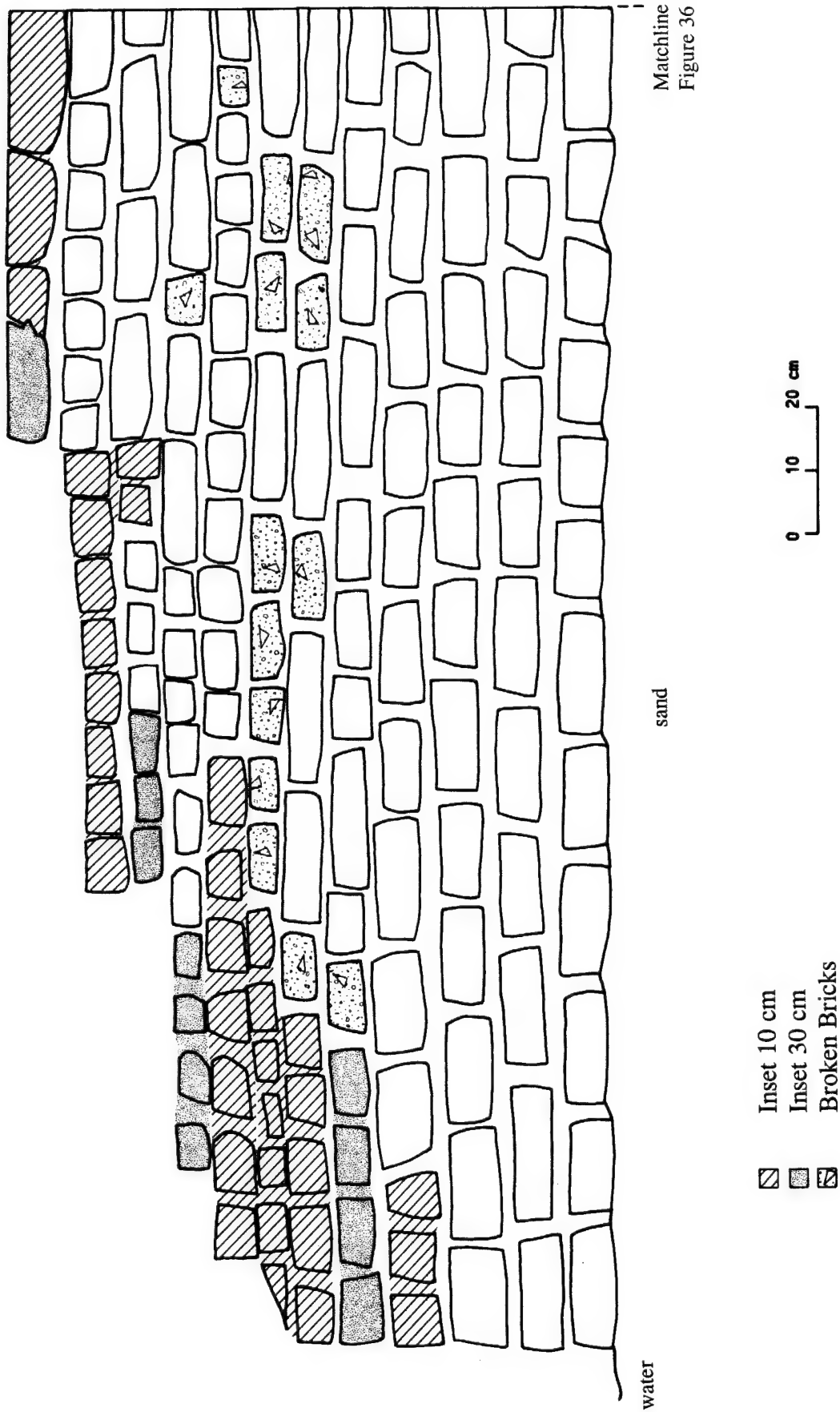


Figure 34. East profile, east wall, 16JE129, sugar house.

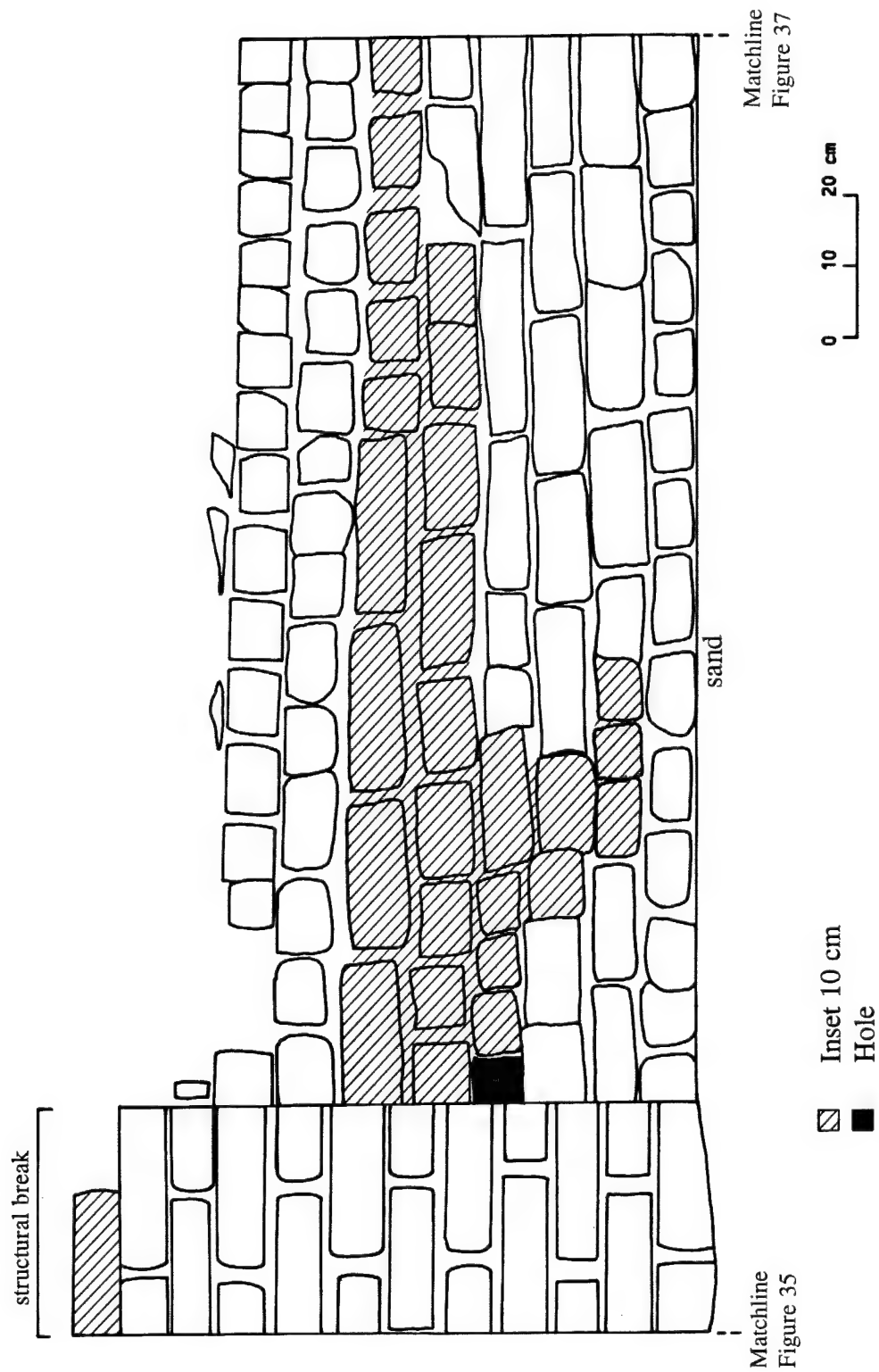


Figure 35. East profile, east wall, 16JE129, sugar house.

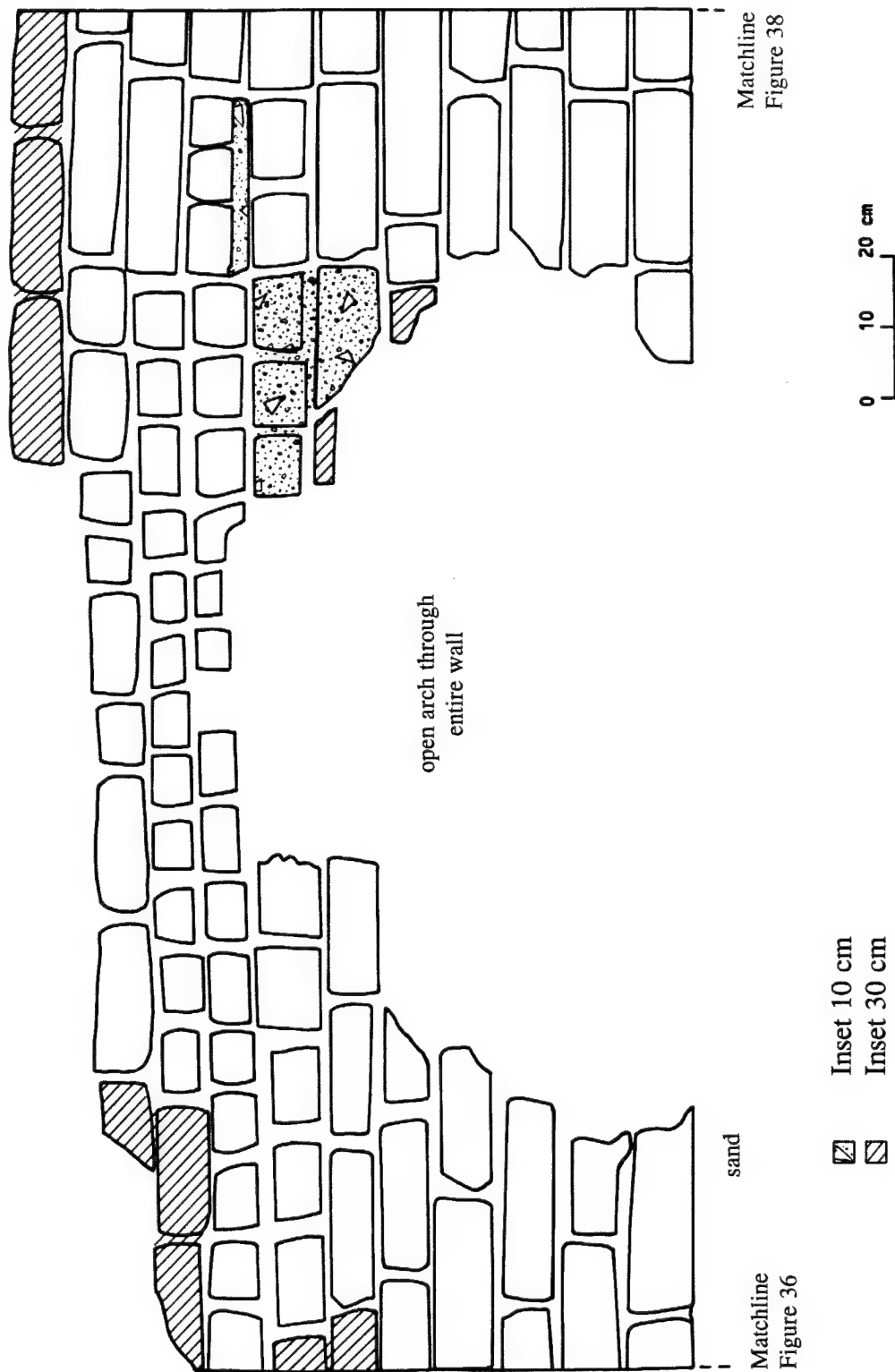


Figure 36. East profile, east wall, 16JE129, sugar house.

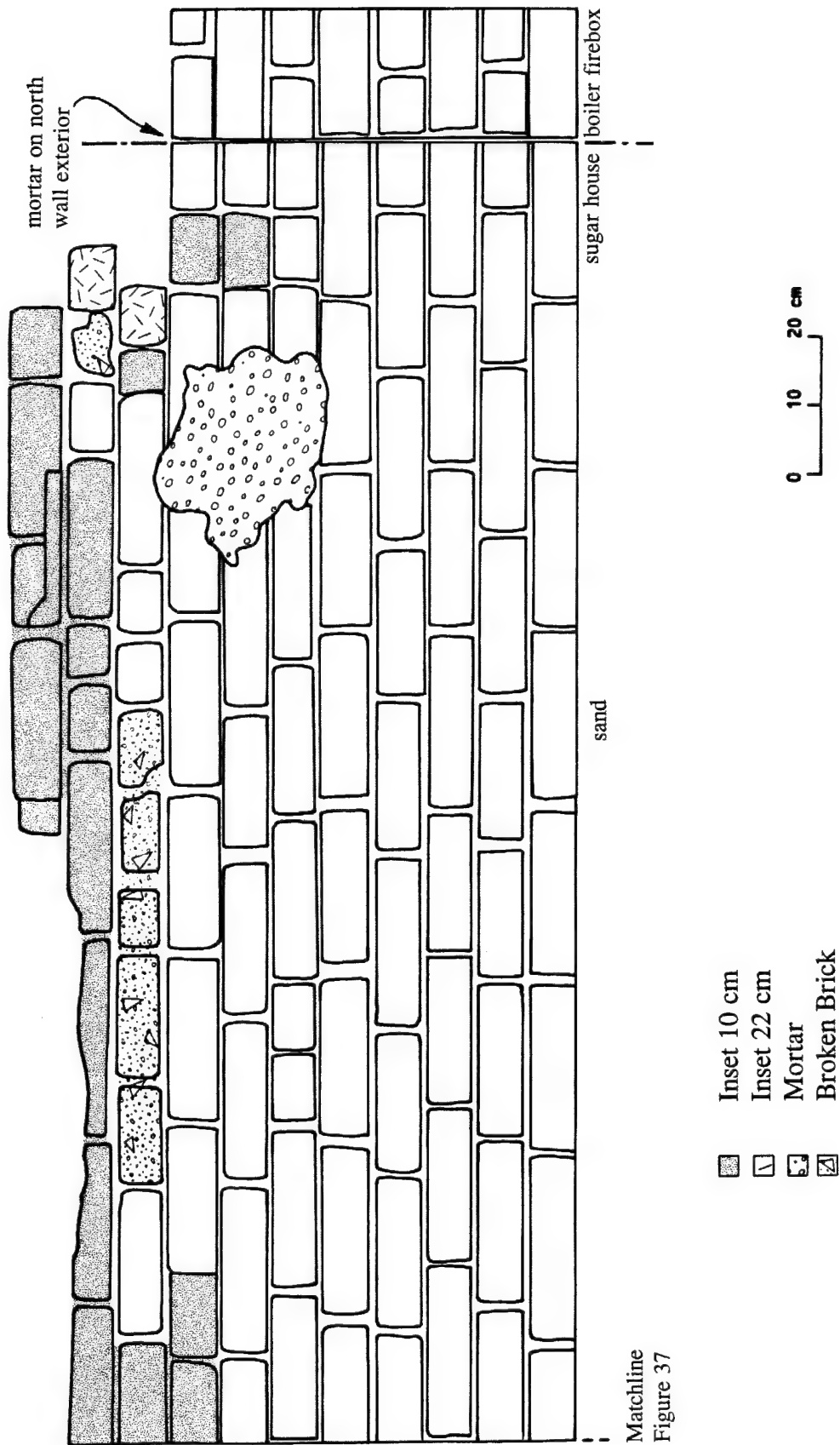


Figure 37. East profile, east wall, 16JE129, sugar house.

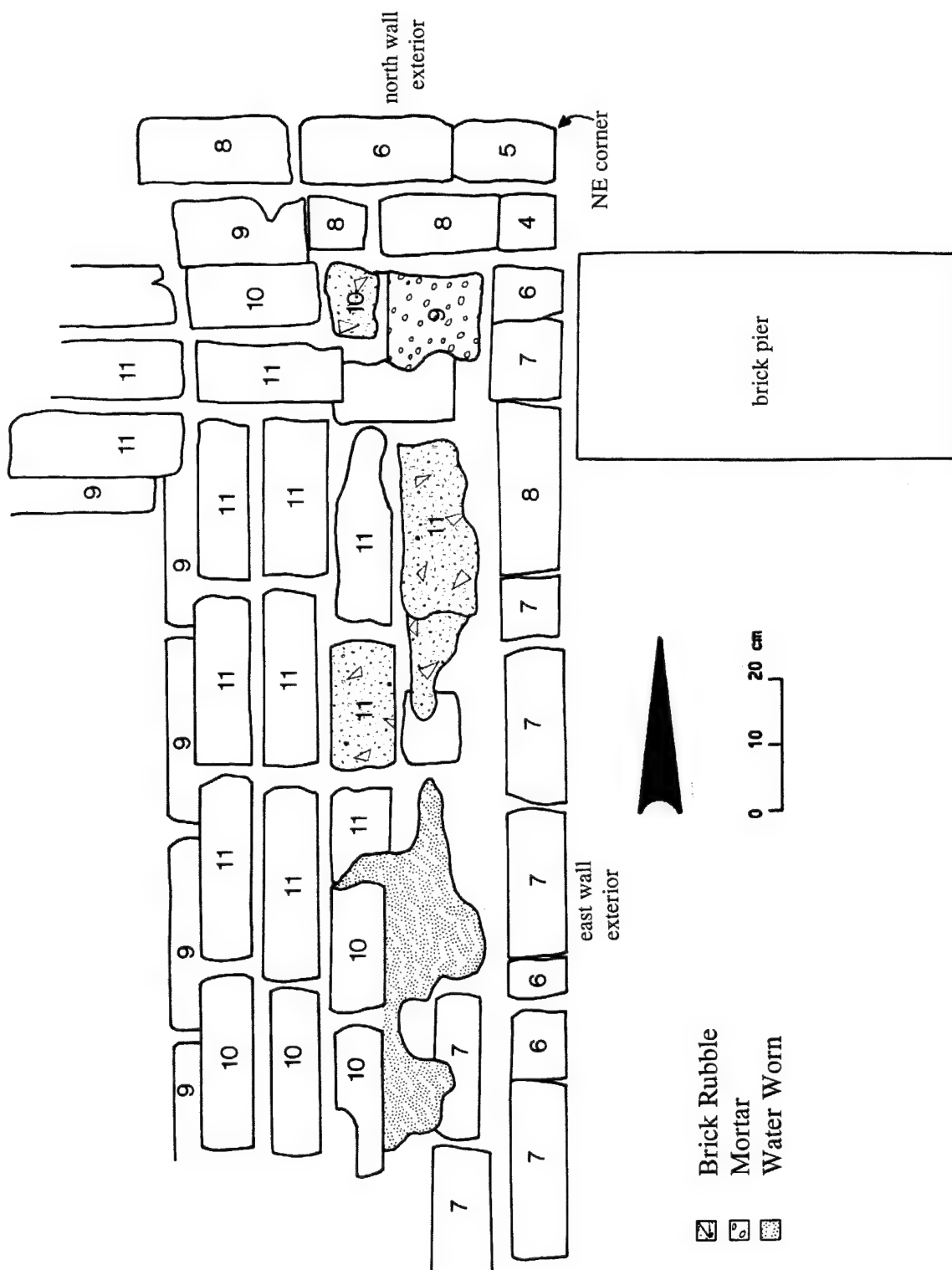


Figure 39. Planview, northeast corner, sugar house, 16JE129 (numbers indicate course).

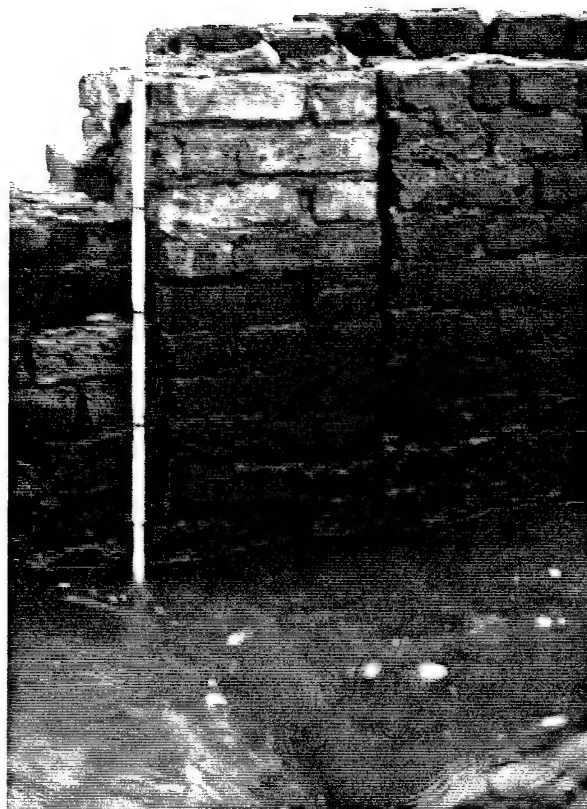


Figure 40. Interior of east wall showing over building, sugar house, 16JE129.

Some of the bricks from the sugar house exhibit impressed manufacturer marks. One type of fire brick is marked "Garnkirk Warranted" on one face and "Patent" on the reverse. Four other examples of fire brick are marked: "T.H. Boucher de Baudour"; "U.S."; "Stourbridge Fire Clay Co."; and "T. Anderson". A brick recovered at the Ashland-Belle Helene Plantation (16AN26) also bore the makers' mark "T. Anderson" (Yakubik et al. 1994:9-61). Two specimens of common brick are marked "J. Noriega" and "N. Bonifay".

Terra cotta paving tiles were also found scattered in the brick rubble. These tiles, which measured 6" x 6" x 3/4", probably were used for flooring. In addition, the tiles were noted in some of the foundations, where they were used to re-align skewed brick courses. As noted above, similar paving tiles were observed at 16JE128.

Wood features at 16JE129 include rows of vertical wood planks and posts observed to the west and to the east of the sugar house. Those located to the west of the sugar house are particularly visible during low tide. In addition, their visibility also depends on the migration of sand along the shoreline. During fieldwork in April, the planks/posts west of the sugar house were visible, but by May, sand covered the features even during low tide. Probes were utilized during field investigations to define the maximum extent of these boards both onto land and into the Gulf.

Twelve wood plank lines and posts are located to the west of the sugar house foundation. The remaining features are located to the east of the structure:

Feature 1: This is the westernmost line of vertical planks/posts (Figure 26). The north end is buried in the sand at N63 E249. The line of planks extends 15 m into the Gulf.

Feature 2: This line of vertical planks/posts is located east of Feature 1 (Figure 26). The north end is at N97 E300, and the line extends 10 m into the Gulf.

Feature 3: This feature consists of two isolated small posts at N107 E316 and N107.5 E317.5 (Figure 26).

Feature 4: This 10 m long line of vertical planks/posts extends into the Gulf (Figure 26). The north end is located at N114 E327.

Feature 5: This feature consists of an isolated vertical plank at N135 E358 (Figure 26).

Feature 6: This feature is an isolated post at N140 E361 (Figure 26).

Feature 7: This feature is an isolated post at N135.5 E362.5 (Figure 26).

Feature 8: This feature consists of a 4 m long line of vertical planks with the north end at N152 E379 (Figures 26 and 41).

Feature 9: This feature consists of a box-like arrangement of vertical planks. The northeast corner of the "box" is at N156.5 E385 (Figures 26 and 42). It measures approximately 100 cm long and 65 cm wide.

Feature 10: This feature consists of a line of posts (Figure 26). One is at N153 E385, with a second 1.5 m and a third at 3 m northeast of the first. One post measures 18 x 22 cm.

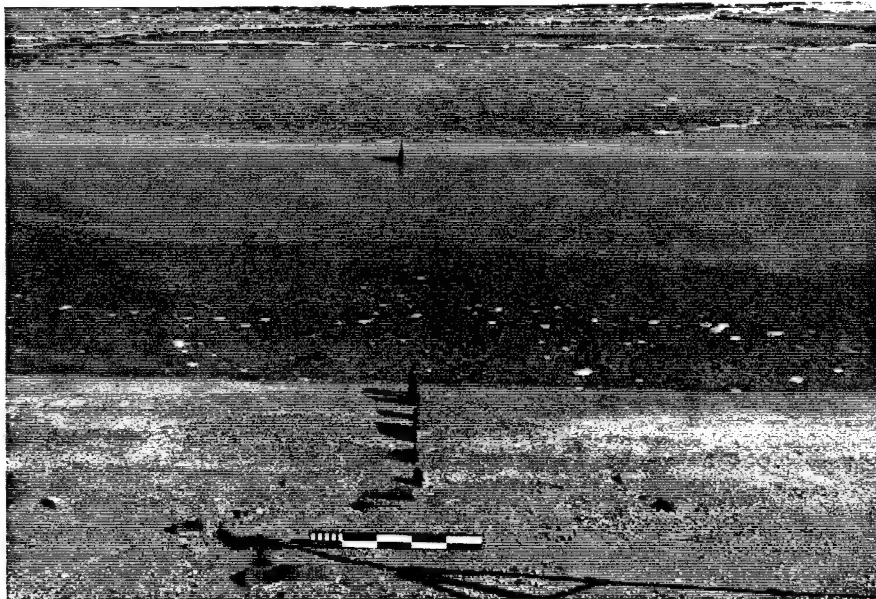


Figure 41. Feature 8, 16JE129.



Figure 42. Feature 9, 16JE129.

Feature 11: This feature is an isolated post at N148.5 E383 (Figure 26).

Feature 12: This feature is an isolated post at N145 E388 (Figure 26).

Feature 15: This feature consists of vertical planks and posts arranged in a roughly-rectangular configuration. the "west wall" is an 11 m long line of vertical planks with the north end located at N192 E420 (Figures 26 and 43). The tops of the seven northernmost planks and the southernmost post are charred. These sawn planks measure 9 x 14 cm, 7 x 20 cm, and 7 x 15 cm. A fragmentary line of vertical planks extends east parallel to the beach for 23.5 m. This feature is located near a series of relatively modern posts, which seem to be related to present-day cattle herding on the island. Feature 15 itself appears to be more recent than the features located to the west of the sugar house.

Feature 16-18: These are isolated planks/posts within the area defined by Feature 15 (Figures 26 and 44). The posts are located at N189.5 E426 (F16), N192 E430.5 (F17) and, N192.5 E431 (F18).

Feature 19: This feature consists of two small posts spaced 55 cm apart. One is located at N215 E467 (Figure 26).

Feature 20: This feature is an isolated board at N221 E490 (Figure 26). The board measures 7.6 x 25.4 cm.

All of these features were photographed at low tide. Subsurface examinations other than probing could not be conducted because of the Gulf surf. No artifacts were found in association with the wood features. Since only small parts of broken planks and posts were visible, it was not possible to positively determine if the features were walls of structures or the remains of fencelines, although the latter seems far more likely.

Figures 45 and 46 present the 1841 Barnard map and the 1853 U.S. Coast Survey map overlain on the site map. Because of the small scale of the two nineteenth-century maps and the lack of three confirmed reference points, digitizing these maps was not possible. Instead, the images were scanned, and the scale was adjusted using the remains of the sugar house and the wood features as referents. In the latter case, it was assumed that the wood features were related to the quarters complex.

Both overlays appear to confirm that the majority of the wood features probably derive from fences or structures formerly extant on the plantation. They suggest that the majority of the plantation is today submerged in the Gulf (Figure 45 and 46). Of the two images, the 1853 map appears to be the more idealized, since it suggests that formal gardens were planted on the estate, which seems doubtful (Figure 46). However, the fencelines shown for the quarters complex on this map provide a remarkably good fit with the locations of Features 1, 2, and 4. In addition, Features 5, 6, and 7 are located very near the projected location of a building of unknown function located to the west of the sugar house.

The overlay of the 1841 map appears to provide even more information on both the features and the subsurface cultural deposits (Figure 45). In this overlay, Features 2 and 4 may be either walls or fences surrounding quarters cabins. Interestingly, the cluster of positive auger tests along and near the E280 line correspond very well with the projected area of the quarters. This would suggest that there is an excellent possibility of intact cultural deposits from the quarters preserved in this area.



Figure 43. Feature 15, 16JE129.

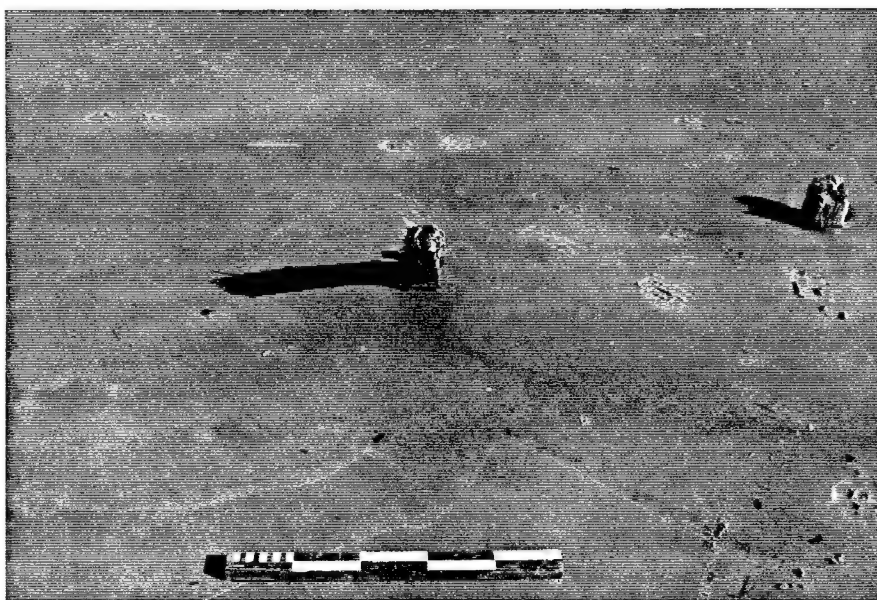


Figure 44. Feature 18, 16JE129.

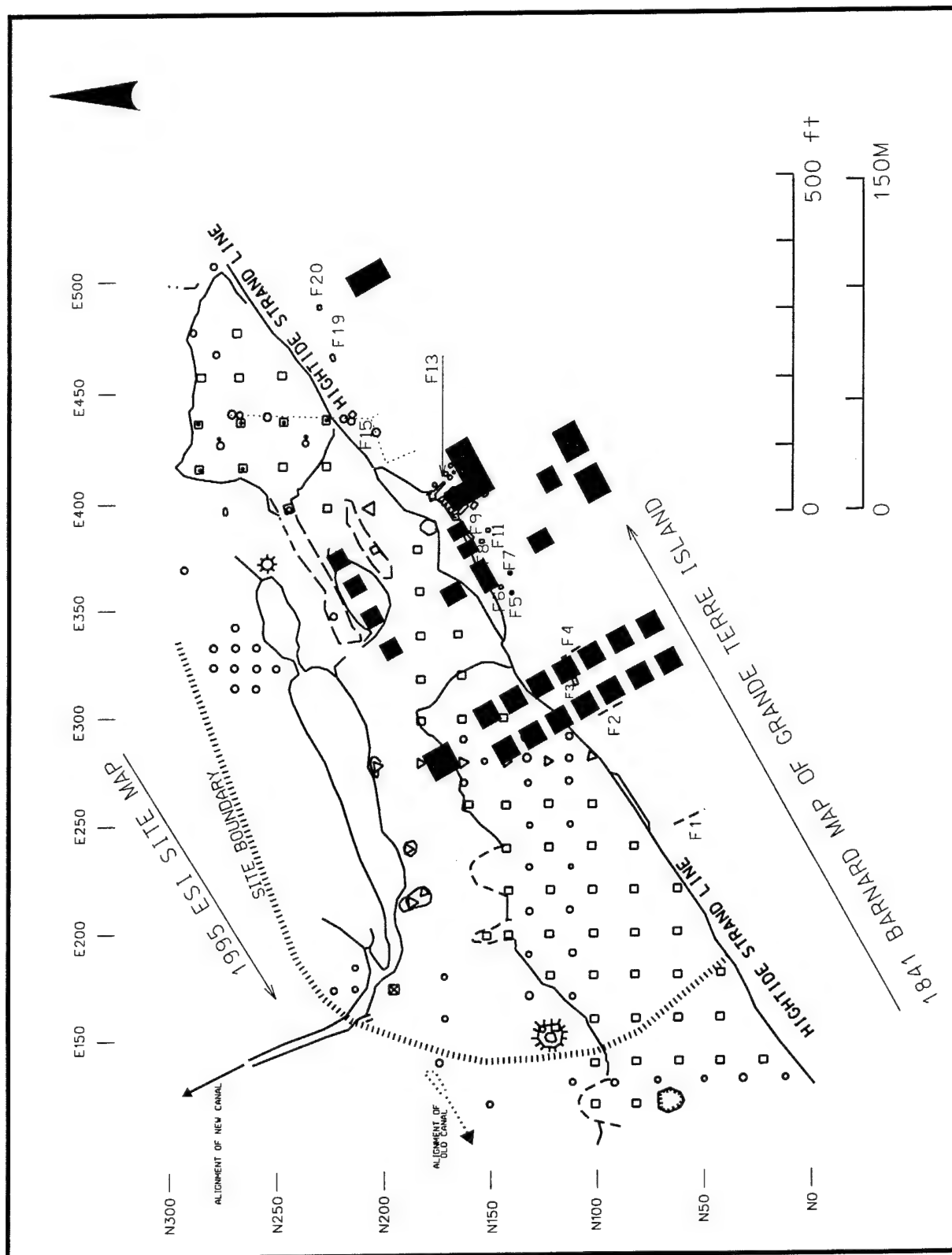


Figure 45. Overlay of 1841 Barnard Map on site map of 16JE129.

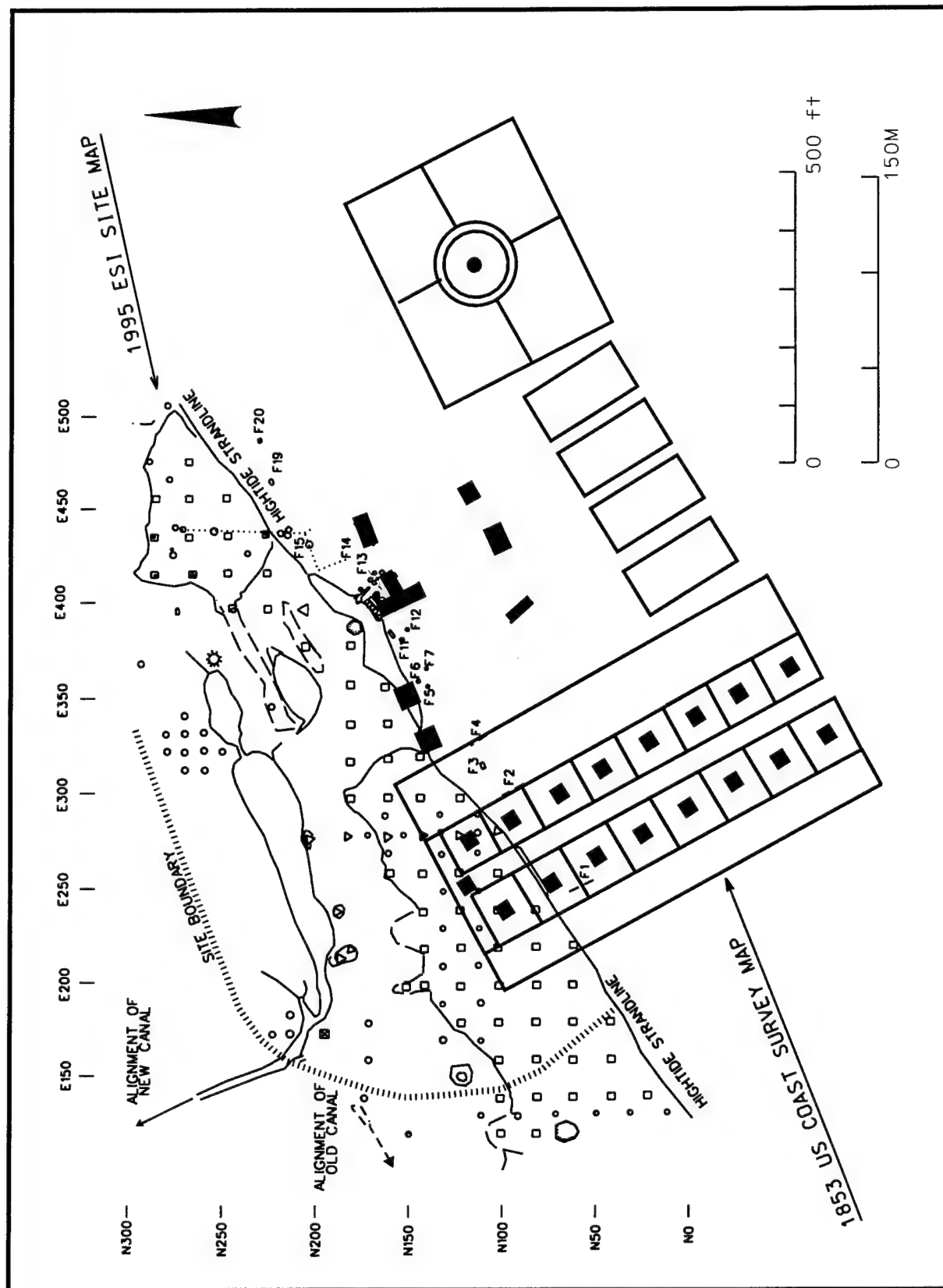


Figure 46. Overlay of 1853 US Coast Survey Map on site map of 16JE129.

In addition, Features 5 through 12 show a good fit with a complex of three buildings immediately west of the sugar house (Figure 45). The 1841 maps also shows a group of four structures to the north of the sugar house that are not illustrated on the 1853 map. The buildings are located across the pond that we have assumed provided fresh water for the sugar house. This suggests that the structures were destroyed and the pond was excavated sometime during the period 1841-1853.

A second group of wood features was found at 16JE129. They included a post and two vertical planks located along the west bank of the New Canal, near the point where the channel turns east. Historic maps do not show a structure in this area (Figures 45 and 46), and they may have been associated with a modest landing. As noted above, only the auger test at N213 E175 yielded small brick and mortar fragments. Magnetometer survey revealed a broad area of positive readings. Anomalies 7 and 8 are associated with this feature.

The exposed portion of the planks measures 1.5 m in height. Probing indicated that the west board is approximately 3.5 m long and the east one is approximately 4 m long. They are spaced about 2 m apart. The boards measure 7 cm in thickness and are 24.1 cm wide. An associated post measures 7.6 x 12.7 cm. No artifacts were found in this area that indicated the function of these planks and post, but the location suggests that they were associated with a plantation landing.

Other cultural features observed at 16JE129 include the canals that serviced the plantation and the ditches that drained the estate. Although the domestic and industrial complexes were located nearer the Gulf shoreline, the majority of the plantation consisted of the agricultural fields that extended north of the structural improvements. The fields were crossed by the New Canal, the Old Canal, and smaller field ditches that drained the silty clay loam which was present on the surface at the time the fields were cultivated. The field ditches associated with the New Canal, which are still visible today, are approximately 1 m wide and 45.7 cm deep (Figure 47). Probing in several areas was unsuccessful for identifying the original bottoms of the ditches.

As noted above, the Old Canal was wider and deeper than the New Canal and was probably the main transportation corridor for the plantation. By contrast, the New Canal probably was first a drainage feature, and only incidentally facilitated transport. Flatboats, skiffs, or other small watercraft would have been utilized to move agricultural products to landings for shipment from the island. Sitterson (1953:135) observes that plantations on the Georgia coast used rice flats to haul the cane from the fields to the sugar house. These rice flats were long, shallow, double-ended boats which could carry several thousand pounds. Flatboats may have been used at 16JE129 for this purpose. Consumer goods from outside markets were brought to the island and were subsequently transported to the habitation complex via the canals. It appears that a landing may have been located at the terminus of the New Canal.

Analysis of Artifacts from 16JE129. A grab surface collection of diagnostic material was made at 16JE129 (Table 19). In addition, collections made by Wildlife and Fisheries personnel were made available for analysis (Table 20). Because subsurface tests yielded little diagnostic material (Table 19), the surface collections provided all the artifacts utilized in the following analyses. Since the artifacts were not found in situ, it is impossible to determine the context from which they derived. However, it can be assumed that the material is associated with the African-American slave and freedmen residents of the plantation and/or the overseer, since there was never a resident planter at Forstall.

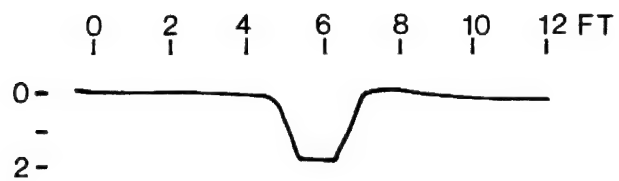


Figure 47. Cross-section of field drainage canal.

Table 19. Artifacts from 16JE129.

	E of Sugar House	W of Sugar House	N130 E280 (80 cmbs)	N130 E290 (140-150 cmbs)	N160 E280 (90-100 cmbs)	Total
Blue hand-painted pearlware		5				5
Green shell-edged pearlware		2				2
Blue shell-edged pearlware		1				1
Blue transfer-printed pearlware		1				1
Whiteware		1				1
Annular whiteware		12				12
Finger-painted whiteware		2				2
Blue shell-edged whiteware	1	13				14
Polychrome hand-painted whiteware		1				1
Blue transfer-printed whiteware	2	5				7
Mulberry transfer-printed whiteware		3				3
Ironstone	1	11				12
Pink-Slipped and Lead- Glazed Redware		2				2
Mottled Green Lead-Glazed Redware		1				1
Olive Jar		1				1
Yellowware		2				2
Annular yellowware		3				3
Brown salt-glazed stoneware, Albany-slipped interior	1					1
Gray salt-glazed stoneware		2				2
Stoneware bottle		3				3
Porcelain		1				1

Table 19. Artifacts from 16JE129.

	E of Sugar House	W of Sugar House	N130 E280 (80 cmbs)	N130 E290 (140-150 cmbs)	N160 E280 (90-100 cmbs)	Total
Black glass					1	1
Black bottle base, bare iron pontil		1				1
Black bottle neck, tooled finish		1				1
Clear glass					1	1
Clear tumbler base		2				2
Light green Lea & Perrins bottle base		1				1
Light green bottle base, rough pontil		1				1
Light green bottle stopper		1				1
Olive glass			1			1
Olive bottle kickup	1					1
Olive bottle neck, sheared lip, applied string		1				1
Gray stoneware elbow pipe bowl, portrait type	1					1
Kaolin pipe stem	1					1
Keg tap (wood and metal)		1				1
Amorphous metal (ct.)				1		1
Amorphous metal (wt. in g.)				3.2		3.2
Bone (ct.)				3		3
Bone (wt. in g.)				1.1		1.1
Brick (wt. in g.)			1.8			1.8
Mortar (wt. in g.)			1.3			1.3
Total	8	81	1	4	2	96

Table 20. Artifacts Collected from 16JE129 by Wildlife and Fisheries Personnel.

Pearlware	5
Blue shell-edged pearlware	1
Blue hand-painted whiteware	2
Whiteware	20
Annular whiteware	8
Finger-painted whiteware	3
Blue shell-edged whiteware	11
Green shell-edged whiteware	2
Polychrome hand-painted whiteware	1
Blue transfer-printed whiteware	11
Brown transfer-printed whiteware	1
Mulberry transfer-printed whiteware	1
Red transfer-printed whiteware	1
Ironstone	38
Pink-Slipped and Lead-Glazed Redware	2
Yellowware	6
Annular yellowware	3
Mocha yellowware	1
Rockinghamware	1
Brown salt-glazed stoneware	2
Gray salt-glazed stoneware	3
Stoneware bottle	1
Black bottle kickup	4
Green bottle neck, flared mouth, applied string	1
Green bottle base	1
Light green pharmaceutical vial, two piece mold, tooled finish	1
Olive turn-molded wine bottle, tooled finish	1
Olive wine bottle neck, applied string	4
Olive wine bottle kickup	4
Total	140

Artifacts were all classified using established archeological classifications (e.g., Yakubik 1990). In addition, minimum numbers of vessels were estimated for the site. One advantage to this technique is that it provides a more realistic idea of the number of whole dishes or vessels actually represented in an assemblage. A single plate may break into dozens of sherds, but those sherds still only represent one item.

Table 21 presents the minimum vessel estimates for 16JE129 ceramics. The 201 ceramic sherds in the ESI and Wildlife and Fisheries collections represent a total of 80 vessels distributed among 26 ceramic types and 10 different vessel forms. This is less variability than seen in collections from the quarters at Ashland Belle-Helene (16AN26) (Yakubik et al. 1994) and Nina (16PC62) (Yakubik 1994) Plantations (Table 22), both of which have substantially larger collections. However, the ceramic assemblage from the quarters of Beka Plantation (16OR90) (Yakubik and Franks 1992a) also exhibited more variability than did the Forstall collection, even though the former (n=263) was only slightly larger than the latter. In particular, the ratio of ceramic types to minimum numbers of vessels is smaller for the Beka collection. It should be noted that the Forstall collection yielded the next smallest ratio, while those from Ashland and Nina Plantations, both of which had assemblages greater than 1700 sherds, were very similar. Thus, the differences in variability may be the result of differences in sample size. Alternately, these ratios may indicate a greater use of unmatched table services at Beka and Forstall than at Nina and Ashland.

Table 23 presents a comparison of the minimum vessel counts by form for the Forstall, Beka, Nina, and Ashland-Belle Helene collections. In general, the Forstall collection is not dissimilar to those from the other plantation quarters areas. The Forstall collection had slightly more plates than the other collections, but relatively fewer cups and saucers. The latter may be the result of the remote location of 16JE129; tea drinking is generally a social pastime that may have been of little importance on this remote plantation. However, The Forstall collection has proportionally more serving bowls and tureens than any of the other assemblages, which would seem to indicate an importance of formal service. Alternatively, they may suggest mess-style meals.

The Forstall collection also included proportionally more storage vessels, including ceramic bottles, than did the other assemblages. This may be a function of context. While the samples used herein from Beka, Ashland, and Nina Plantation derive exclusively from the quarters of these estates, the context for Forstall is presumably plantation-wide. Thus, the difference seen in the proportions of this particular form may reflect the relative rarity of food preservation within plantation quarters.

Economic scaling was also undertaken for the collection from Forstall Plantation. Miller (1980) suggested that classification of nineteenth-century ceramics should be based on decorations and form because ceramics were marketed by these criteria. He argued that the separation of ceramics by ware type provides little if any information beyond chronology. Instead, Miller (1980:3-4) proposed sorting ceramics into four groups based upon cost: undecorated, minimally decorated (e.g. shell-edged, annular, sponged), hand-painted, and transfer-printed. He presented a set of index values developed from various price lists (Miller 1980) and then, with new research, revised these in 1991 (Miller 1991).

By calculating the average index values for ceramic collections, research on the expenditures made for ceramics within archeological assemblages can be undertaken. This facilitates both intrasite and intersite comparisons. Miller's indices (1980, 1991) are designed primarily for the nineteenth century, for which we have extensive documentation on the marketing and pricing of the English potters. The study of expenditures leads to discussions on ceramic use, household economics, distribution and consumption, and social status.

Table 21. Minimum Vessel Estimates, 16JE129.

	Plate	Bowl	Cup	Saucer	Tureen	Basin	Serving Bowl	Storage Vessel	Pitcher	Bottle	Unid.	Total
Blue hand-painted pearlware	1	1										2
Green shell-edged pearlware	2											2
Blue shell-edged pearlware	1											1
Blue transfer-printed pearlware									1			1
Whiteware				1								1
Finger-painted whiteware		4										4
Annular whiteware		8							1		1	10
Blue shell-edged whiteware	8											8
Green shell-edged whiteware	2											2
Polychrome hand-painted whiteware	2							1				3
Blue transfer-printed whiteware	4		1	1								6
Brown transfer-printed whiteware	1											1
Mulberry transfer-printed whiteware	1	1			1							4

Table 21. Minimum Vessel Estimates, 16JE129.

	Plate	Bowl	Cup	Saucer	Tureen	Basin	Serving Bowl	Storage Vessel	Pitcher	Bottle	Unid.	Total
Red transfer-printed whiteware	1											1
Ironstone	4		2	1			1					8
Pink-Slipped and Lead Glazed Redware		1				2						3
Mottled Green Lead-Glazed Redware								1				1
Olive Jar			2								1	3
Yellowware		4										4
Annular yellowware		3					1					4
Mocha yellowware		1										1
Brown salt-glazed stoneware								2				2
Brown salt-glazed stoneware, Albany-slipped interior											2	2
Gray salt-glazed stoneware								2		2		4
Stoneware bottle			1							1		2
Porcelain											1	1
Total	27	23	6	3	1	2	4	5	2	3	4	80

Table 22. Comparison of Numbers of Minimum Vessels, Ceramic Types, and Vessel Forms.

Site	MNV	# of Ceramic Types	# of Vessel Forms	Ratio of Types to Vessels
Forstall	80	26	10	1:3.1
Ashland Cabin 1	287	62	18	1:4.6
Ashland Cabin 2	295	65	16	1:4.5
Beka	93	37	13	1:2.5
Nina	262	57	16	1:4.6

Table 23. Comparison of Minimum Vessel Counts, Forstall, Ashland, Beka, and Nina Plantations.

	Forstall		Ashland Cabin 1		Ashland Cabin 2		Beka		Nina	
	n	%	n	%	n	%	n	%	n	%
Plate	27	33.8	77	26.83	101	32.24	28	30.11	83	31.68
Platter							4	4.3	1	0.38
Saucer	3	3.8	41	14.29	37	12.54	13	13.98	17	6.49
Bowl	23	28.8	75	26.13	71	24.07	17	18.28	80	30.53
Serving Bowl	4	5.0	4	1.39	1	0.34	4	4.3	4	1.53
Tureen	1	1.3	2	0.7	1	0.34				
Pie Plate			1	0.35						
Jar/Crock			2	0.7	1	0.34	1	1.08	4	1.53
Cup	6	7.5	49	17.07	46	15.59	10	10.75	22	8.40
Mug			4	1.39	8	2.71				
Pitcher	2	2.5	8	2.79	9	3.05	6	6.45	6	2.29
Teapot			1	0.35			1	1.08	1	0.38
Pitcher/Teapot					1	0.34				
Bottle	3	3.8	5	1.74	3	1.02			5	1.91
Jug			6	2.09					4	1.53
Lid			1	0.35					1	0.38
Large Storage Vessel	5	6.3					2	2.15		
Basin	2	2.5	1	0.35	1	0.34				
Chamber Pot			6	2.09	7	2.37	3	3.23	7	2.67
Rouge Pot			2	0.7	1	0.34	1	1.08	3	1.15
Flower Pot			2	0.7	1	0.34			1	0.38
Unident.	4	5.0			6	2.03	3	3.23	23	8.78
Total	80		287		295		93		262	

Average ceramic index values (Miller 1980, 1991) were calculated for plates, bowls, and cups, and saucers using the 1853 index values as the scale for the Forstall assemblage. If an index value for a particular type in a particular year was not provided, that from the closest year to the one being utilized was selected. Types not included in Miller's (1980, 1991) lists of index values (e.g. coarse earthenwares, stonewares) or forms other than plates, bowls, and cups, and saucers were not utilized in the calculations. Although Miller recommends breaking down assemblages into discrete periods of occupation, this was not an option.

The results are presented in Table 24. They are compared to the average index values calculated for the ceramics from the quarters at Ashland, Beka, and Nina Plantations (Yakubik 1994; Yakubik et al. 1994; Yakubik and Franks 1992a). Interestingly, the Forstall collection yielded the highest mean value. This indicates that expenditures for ceramics were higher at Forstall than at the other sites. This is undoubtedly the result of the relatively high expenditures for plates. One explanation for this may be the presence of material from the overseers assemblage in the Forstall collection. However, it cannot be assumed that this difference reflects a higher socio-economic level for Forstall's occupants. Examinations of average ceramic index values from the Destrehan Plantation great house (16SC61) (Yakubik 1993), the site of the civil prison formerly located at the Cabildo (16OR129) (Yakubik and Franks 1992b), and 16SC61 (Franks and Yakubik 1993) suggest that within southeastern Louisiana, relatively high index values for lower socio-economic groups are not unusual. Similarly, ceramics from the vicinity of plantation great houses tend to yield relative low average index values. This pattern has been found even for cup and saucer indices, which appear to be more reflective of economic status in other contexts (Spencer-Wood and Heberling 1987; Spencer-Wood 1987). Klein (1991) reports that other researchers also have obtained incongruous results, and suggests that factors such as household life cycle, income strategies of individual households, household structure and size all affect the composition and thereby the value of individual ceramic assemblages. Additionally, Adams and Boling (1989) found, in data from three Georgia plantations, that it is not uncommon for slaves to have more expensive vessels than their masters had for certain forms. The authors suggest three explanations: 1) the planter simply purchased good ceramics for his slaves; 2) slaves received these wares as hand-me-downs; and 3) some slaves on task labor system plantations participated freely within the market economy. It should be noted that the last of these seems unlikely given Forstall's remote location.

It is possible that the low values associated with higher socio-economic contexts reflect the fact that the "fine china" utilized by wealthy households did not enter the archeological record in any substantial amount, whereas the "every-day dishes" are handled less carefully, and consequently, broken more frequently. This might lend support to the idea that the differences in the index values of the collections is the result of the presence of the overseer's material in the Forstall assemblage. Presumably, the overseer might have access to and the funds to purchase better tableware than the slaves, but not the quality of ceramics utilized by a planter. Alternatively, the meaning of ceramics differed for planters and their African-American laborers. Burley (1989) found that among the nineteenth-century hibernant Metis of northwestern Canada, ceramics had a symbolic role in social organization and group integration. Similarly, ceramics may have been more important as a status indicator (or they may have served some other symbolic social function) among lower socio-economic groups than was the case for higher socio-economic groups in southeastern Louisiana.

Finally, mean ceramic dates were calculated for the Forstall collection. Mean ceramic dating is essentially a seriation technique, since it is based on the assumption that ceramic types exhibit a unimodal distribution through time (South 1972:73-74). Using temporal information provided by Noel Hume (1970), South (1972, 1977:201-236) presented manufacturing date ranges for 78 ceramic types. South assumed the midpoint of manufacture for each type

Table 24. Comparison of the Average Ceramic Index Values for Plates, Bowls, Cups and Saucers for Forstall, Ashland-Belle Helene, Beka, and Nina Plantations (Miller 1980, 1991).

SITE	AREA	LOCATION	DATE	INDEX	N	CUPS	SAUCERS	PLATES	BOWLS	MEAN
Forstall	Quarters/ Overseer	Surface	1821- 1886	1853	47	2.35	2.37	2.26	1.24	1.99
Ashland-Belle Helene Plantation	Quarters	Cabin 1 Strata 1&2	1841- 1910	1866	195	2.41	1.74	1.65	1.53	1.79
Ashland-Belle Helene Plantation	Quarters	Cabin 1 Strata 1&2	1844- 1907	1866	190	2.39	2.00	1.60	1.50	1.77
Beka Plantation	Quarters	EU 5	1805- 1900	1866	58	1.98	1.57	1.68	1.51	1.66
Nina Plantation	Quarters	Trenches 1-4	1820- 1900	1859	156	2.39	1.80	1.51	1.28	1.52

was its popularity peak, and assigned this as the "median date." The mean ceramic date (Y) is then calculated by the formula:

$$Y = \frac{\sum_{i=1}^n X_i * f_i}{\sum_{i=1}^n f_i}$$

where X_i is the median manufacture date; f_i is the frequency; and n is the total number of ceramics used in the calculation.

South (1972) developed this technique for use on eighteenth-century Anglo-American sites, but he encouraged expansion of the concept to include other data sets. Later he presented date ranges, median dates, and index dates (adjustments to the median dates) for majolica types based on Goggin's (1968) research (South 1977:238-247). Other investigators have modified the formula for use in nineteenth-century contexts (McCloskey 1979; Lofstrom et al. 1982; Yakubik 1990).

The Forstall Plantation collection yielded a mean ceramic date of 1852.4 ($n=150$). This agrees extremely well with the midpoint date of occupation, which is 1853.5 based on documented occupation dating 1821-1886. The mean ceramic date was also calculated using minimum vessel counts. This method yielded a slightly earlier date of 1848.7 ($n=65$).

In summary, the small surface collection obtained from 16JE129 demonstrates the site's research potential. The analyses presented above have raised a number of issues concerning ceramic variability, vessel form, and economic scaling that can only be addressed with data from *in situ* contexts.

NRHP Evaluation. An intensive augering program at 16JE129 revealed that cultural deposits are buried at depths ranging from .75 to 1.75 m below surface. Given the presence of structural features eroding on the Gulf beach, it seems likely that features are preserved at these depths in terrestrial portions of the site. The fact that the deposits are deeply buried in an area that has undergone little cultural modification since the nineteenth century suggests that the site possesses the quality of integrity.

Data from the site have the potential to address the theme of Plantation Archeology identified in Louisiana's Comprehensive Archeological Plan (Smith et al. 1983:98, 252). The plantation was established on the island during the early 1820s, and sugar was produced on the estate until after the Civil War. Despite the availability of historic documents on sugar production and sugar estates, archeological sites preserve the *in situ* evidence for activities not addressed in the written records. Systematic archeological investigations of the cultural deposits at 16JE129 may permit the examination of diachronic change on a coastal plantation during the major period of sugar production in the region. Comparison of the results of excavations at 16JE129 with archeological investigations at sugar plantations in other parts of the South would provide comparative data for identifying economic and social patterns unique to the coastal region of Louisiana.

Given its unique location on a Gulf barrier island, 16JE129 may provide unequalled data concerning the role, regional diversity, and history of Louisiana's plantation society. It is likely that the economic patterns at Forstall were unlike those seen at other plantations, since fuels had to be imported, products and equipment had to be moved internally via a canal system, and products of the plantation had to be transported to markets off the island. The relative isolation of plantation personnel, the effects of hurricanes, and the need to obtain fresh

water for the steam boiler were issues that affected all southeastern Louisiana planters, but to a lesser extent than was the case at 16JE129. Periodic inundation of the island with salt water during major storms must have had a major impact on crop productivity. Fear of the destructive nature of storms may have caused the plantation to be structured differently from those on the mainland. The destruction of plantation improvements and crops during major storms probably required the reorganization of tasks.

Despite the small size and relative lack of diversity of the assemblage, ceramics recovered from 16JE129 were used to address issues concerning vessel function, decorative variability, and economic scaling in an effort to investigate whether the unique conditions on Grand Terre were reflected in the material record. It is possible that the differences seen between the Forstall collection and those from the Mississippi River plantations used for comparison reflect distinct patterns on the island, but sample size was too small to draw any definite conclusions. Then too, artifacts from surface collections lack the contextual information provided by *in situ* deposits. Excavations at 16JE129 would provide a larger collection of material with contextual control that could be compared to data from other nineteenth-century estates. Recent archeological mitigation at Ashland Plantation (16AN26) and Nina Plantation (16PC62) provide outstanding comparative data from Mississippi River plantations. Thus, on the basis of research potential (Criterion D) and integrity of deposits, 16JE129 is eligible for nomination to the NRHP.

The research potential of the sugar house has been exhausted by the current effort. The structure has been thoroughly documented both with photographs and plans. As demonstrated above, enough of the structure is extant to define the function of some of the features. It is unlikely that further examination of this structure would yield additional data.

CHAPTER 7

SUMMARY AND RECOMMENDATIONS

Cultural resource investigations were conducted by Earth Search, Inc., on Grand Terre Island in Jefferson Parish, Louisiana. Investigations of two historic canals included a magnetometer survey, wire drag, auger testing, and visual examination of the bottoms and banks of canals. Anomalies were recorded along both of the canals during the survey. These were examined more thoroughly with metal detector, probing, and shovel testing. In addition, three historic sites were investigated using a regime of probing, augering, and shovel testing. Archeological investigation was directed toward delineating site boundaries, identifying *in situ* cultural deposits, recording disturbed portions of the sites, and determining the NRHP status of each site.

Recommendations for Magnetometer Anomalies

Three magnetometer anomalies were recorded along the Old Canal, and seven were recorded along the New Canal. The anomalies along the Old Canal include:

Anomaly 1. This small ferrous object or concentration was recorded along the east side of the Old Canal. Additional examination did not identify the nature of the object. It is considered a spot find, and it has not been assigned a site number. It has no further research potential and is therefore ineligible for nomination to the NRHP. No further work is recommended at Anomaly 1.

Anomaly 2. This small ferrous object or concentration was recorded along the east side of the Old Canal. Additional examination did not identify the nature of the object. It is considered a spot find, and it has not been assigned a site number. It has no further research potential and is therefore ineligible for nomination to the NRHP. No further work is recommended at Anomaly 2.

Anomaly 3. This small ferrous object or concentration was recorded along the east side of the Old Canal. Further examination did not identify the nature of the object. It is considered a spot find, and it has not been assigned a site number. It has no further research potential, and is therefore ineligible for nomination to the NRHP. No further work is recommended at Anomaly 3

Magnetometer anomalies located along the New Canal include:

Anomaly 4. Two ferrous objects were found near a post at the mouth of the New Canal adjacent to 16JE127. The anomaly is considered part of the site.

Anomaly 5. This small ferrous object or concentration was recorded along the east side of the New Canal. It was not relocated subsequent to its initial recording. The anomaly is considered a spot find, and has not been assigned a site number. It has no further research potential and is therefore ineligible for nomination to the NRHP. No further work is recommended at Anomaly 5.

Anomaly 6. A strong, large positive reading was found on the east side of the New Canal. Probing revealed a relatively modern pipeline. Anomaly 6 is therefore not considered a site, and it was not assigned a site number. It has no research potential and is therefore ineligible for nomination to the NRHP. No further work is recommended at Anomaly 6.

Anomaly 7. A broad field of anomalies was detected at the end of the New Canal by Forstall Plantation. Probing of the area failed to locate any cultural features other than a buried wood post and two boards. This is the location a presumed landing for the plantation at the inland terminus of the New Canal, and the anomalies are likely associated with the landing. Anomaly 7 is therefore considered part of 16JE129.

Anomaly 8. A ferrous object or small concentration was recorded along the east bank of the New Canal. Attempts to excavate the object were unsuccessful because of the water level and the depth of the object. Its proximity to Anomaly 7 suggests that Anomaly 8 may also be associated with the landing. Anomaly 8 is therefore considered part of 16JE129.

Anomalies 9 and 10. Small ferrous objects or concentrations were recorded in the ponded area behind Forstall Plantation. Attempts to relocate the objects were unsuccessful. Their proximity to Anomalies 7 and 8 suggest they may also be associated with the plantation landing. Anomalies 9 and 10 are therefore considered part of 16JE129.

In summary, there is no indication that submerged boats, landings, or structures exist along the Old Canal. Ten anomalies were recorded during magnetometer survey of these canals. The three anomalies along the Old Canal are spot finds. Anomaly 5 could not be relocated, and Anomaly 6 is a pipeline. None of these anomalies are eligible or potentially eligible for nomination to the NRHP. No further work or protection is recommended for Anomalies 1, 2, 3, 5, and 6. Anomaly 4 is considered part of 16JE127, and as such, is not eligible for nomination to the National Register of Historic Places. Anomalies 7-10 are associated with 16JE129, and therefore are eligible for nomination to the National Register as part of that site.

Recommendations for 16JE127, 16JE128, and 16JE129

The Grand Terre Pipeline Canal site, 16JE127, consists of an oyster and *Rangia* shell scatter at the intersection of the New Canal and a pipeline canal, which lies immediately north of the site. Brick fragments are intermixed with the shell. Extensive erosion has occurred on the bay side of the site. There has been at least .5 km loss of land on the bay side of the island during the last 100 years, but most of this erosion has occurred since the 1950s (McBride et al. 1992:72).

Wire drag revealed a broken post protruding from the bottom of the bay off the shoreline. Several submerged boards were also observed near the edge of the pipeline canal. No terrestrial features were found during probing, shovel testing, and augering on land. Very few artifacts have been recovered from the site in the past. The few ceramic sherds collected during the current investigation date to the mid-to-late-nineteenth-century. A possible ballast stone was found, and two ferrous objects were observed near the post. The function of the site could not be positively identified, although it appears likely that it was a pumping station associated with 16JE129. The paucity of artifacts and absence of features indicate that 16JE127 lacks further research potential. The site is ineligible for nomination to the NRHP. No further work is recommended at 16JE127.

16JE128, the Lafitte's Settlement site, consists of a rich artifact scatter eroding out of the shoreline along Barataria Bay and along the Old Canal. Major erosion has occurred along the bay, and the remainder of the site, with the exception of three small hummocks, has subsided. Wire drag and walking and feeling along the bay bottom revealed a number of submerged broken posts. A submerged box-like feature of vertical boards with horizontal cross

pieces was also observed. The only terrestrial deposits observed consisted of a concentration of brick fragments, a possible horse tooth, and a metal fragment, which were found in a shovel test excavated into one of the hummocks landward from the shoreline. Probing in and around two other hummocks and augering along the Old Canal failed to reveal other *in situ* cultural deposits.

Archival evidence suggests that 16JE128 is the location of Jean Laffite's Grand Terre base. Artifacts collected from the site are consistent with this interpretation in terms of their chronology, their nature, and the quantities present. In addition, the presence of two small paving tile fragments identical to those found at 16JE129, as well as the size and location of the Old Canal suggests that this channel probably continued to be the primary transportation corridor on the island in the years following the Baratarian occupation. Thus, it seems likely that remains related to the plantation occupation are also preserved at the site. The presence of *in situ* cultural deposits along the shoreline and wood features offshore indicates that the site possesses the quality of integrity despite continued erosion and subsidence. Examination of artifacts eroding out of the shoreline shows that the migration of artifacts as the result of wave action has probably been minimal, except during occasions of severe storms.

The site thus provides an unprecedented opportunity for the examination of a service center dating to the early-nineteenth century (see Smith et al. 1983:255). Although the Baratarians engaged in illegal commerce, these items were redistributed to respectable inhabitants of coastal Louisiana. As such, the Baratarians had an impact on the economy of the early American period. It seems likely that 16JE128 was a centralized redistribution point where Laffite and the other Baratarians warehoused and auctioned illegally acquired goods.

The site also has the potential to address the theme of Submerged Archeological Sites identified in Louisiana's Comprehensive Archeological Plan (Smith et al. 1983:252). The importance of preserving and/or investigating submerged sites is recognized since erosion and subsidence are major natural processes destroying the cultural resources of Louisiana. As the result of wire drag, magnetometer survey, and other means of site examination, wood posts and boards have been identified that are probably associated with houses, warehouses, wells, and other features. Mapping these features and recovering the *in situ*, associated artifacts would facilitate research on nineteenth-century site organization and, possibly, diachronic change in site layout. For all of these reasons, 16JE128 is significant under Criterion D, the potential to yield information important to history.

The site is also significant because of its association with Jean Laffite, one of Louisiana's most infamous and revered criminals. Although other pirates and privateers were active during this period, the romantic legend surrounding Laffite is unsurpassed. Then too, Grand Terre is the locale most closely associated with Laffite other than Galveston Island. However, it should be noted that Laffite came to infamy during his activities on Grand Terre. In addition, Laffite's operations on Grand Terre were more extensive than those at Galveston. Thus, 16JE128 is significant under Criterion B, the association with the lives of persons important in our past.

Thus, 16JE128 is eligible for nomination to the NRHP under Criteria B and D. It is recommended that the placement of dredge material be limited to within the Old Canal itself and to the area to the northeast of the canal to avoid impacts to the site. No significant resources were found within the canal itself, and filling the canal will actually help reduce site erosion. If the site area to the southwest side of the canal cannot be avoided, additional testing should be conducted at 16JE128 to fully define the site's horizontal and vertical site extent. The limited nature of the current investigations as well as site subsidence precluded precise definition of terrestrial and offshore, submerged boundaries. Such investigation should focus on the submerged resources, since features are known to be present within the bay. In addi-

tion, close-interval auger testing or probing (no greater than 5 m gridded intervals) should be conducted insofar as is possible, given the subsided and flooded nature of the "terrestrial" portion of 16JE128. Finally, a minimum of one 1 x 1 m unit should be excavated on hummock 3 where the brick concentration was identified.

16JE129, the Forstall Plantation site, is located on the eroding beach of the Gulf of Mexico. Cultural features include the remains of the brick sugar house and alignments of wooden planks and posts protruding from the sandy bottom of the Gulf. Redeposited artifacts eroded from *in situ* deposits offshore are scatter on the shoreline.

Six auger tests were positive for cultural materials. These demonstrated that cultural materials were buried at depths ranging from 80 to 175 cm below the present day ground surface at the site. The depth of these deposits along with the presence of features demonstrates that the site possesses the quality of integrity.

The research potential of the sugar house has been exhausted by the current effort. The structure has been thoroughly documented both with photographs and plans. As demonstrated in Chapter 6, enough of the structure is extant to define the function of some of the features. It is unlikely that further examination of this structure would yield additional data.

Data from 16JE129 have the potential to address the theme of Plantation Archeology identified in Louisiana's Comprehensive Archeological Plan (Smith et al. 1983:98, 252). Forstall Plantation's unique location on a barrier island may provide unequaled data concerning the role, regional diversity, and history of Louisiana's plantations. Investigations at 16JE129 may permit the examination of diachronic change at one of the few sugar estates not located on the mainland. Such investigations have the potential to increase our understanding of the modifications necessary for successful commercial sugar production in a relatively hostile setting.

In addition, analyses presented in Chapter 6 demonstrate that even the surface collections from the site can yield data concerning decorative variability, vessel function, and economic scaling. Artifacts collected from known contexts would permit still more detailed comparisons to be made and more definitive conclusions to be drawn. Thus, 16JE129 clearly possesses research potential.

Because of its potential to yield information important to our understanding of history (Criterion D) and because it exhibits the quality of integrity, 16JE129, which includes anomalies 7-10, is eligible for nomination to the National Register of Historic Places. It is recommended that dredge material not be placed on the site, and that construction for the placement of dredge material avoid the site area. The site protection zone encompasses an area measuring 457.2 m east/west by 213.4 m north/south. This area encompasses structural features shown on historic maps, the sugar house, and the presumed landing (Figure 26). Within this area, two different zones can be defined. It is recommended that the Gulf beach and the immediate offshore area be completely avoided to prevent impacts to the sugar house and plank and post linear features. Landward of the beach, however, cultural deposits are deeply buried. It is recommended that ground-disturbing activities north of the beach not exceed 50 cm depth. This will insure that deposits, which are buried at depths of 75 cm and greater, are not disturbed. If the site cannot be avoided, data recovery is recommended in those areas which will be impacted. This would include underwater excavations in the offshore areas, where the majority of the plantation's structural improvements, including the quarters complex, appear to be preserved. Terrestrial portions of the site which might be impacted should be mechanically stripped of overburden. Exposed cultural deposits should be sampled with hand excavation; at least a 5% sample of the impact area should be removed. Priority should be given to any cultural features that are revealed during stripping.

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APPENDIX I
SCOPE OF SERVICES

21 Dec 94

SCOPE OF SERVICES
CONTRACT DACW29-94-D-0020 (ESI)
DELIVERY ORDER # 04

CULTURAL RESOURCES INVESTIGATIONS
ON GRAND TERRE ISLAND,
JEFFERSON PARISH, LOUISIANA

1. Introduction. This delivery order calls for background research and limited survey and site testing within additional disposal areas on Grand Terre Island, Jefferson Parish, Louisiana. The U.S. Army Corps of Engineers, New Orleans District (NOD) plans to use material from routine maintenance dredging of the Barataria Bay Waterway bar channel to restore portions of Grand Terre Island. Information is required to identify cultural resources, provide updates on the condition of two previously recorded sites in the project area and to provide recommendations for the beneficial placement of dredge material.

Preparation of a management summary and comprehensive draft and final reports of investigation are requirements of this study. The contract period for this delivery order will be 24 weeks.

2. Study Area. The location and description of work is provided as Attachment 1. Material dredged from the bar channel during the upcoming cycle will be used to fill in the low area and close off a breach between the bay and gulf sides on the east side of the island. No impacts to significant cultural resources are anticipated from construction associated with the upcoming dredging cycle. During subsequent cycles, material will be used to fill canals and open water areas on or behind the island.

3. Background Information. Cultural resources studies in the vicinity of the project were completed by Coastal Environments, Inc. (1979) and R.Christopher Goodwin & Associates, Inc. (1985). Three archeological sites were recorded in the project area as a result of the investigations. These sites include Grand Terre Pipeline (16EBR127), Lafitte's Settlement (16JE128), and Forstall Plantation (16JE129). Sites 16JE127 and 16JE128 were reported largely destroyed and destroyed, respectively, in the 1985 study. Site 16JE129 was considered potentially eligible for inclusion in the National Register of Historic Places.

NOD conducted an inspection of the project area during November 1994. Each of the three sites previously recorded in the project area were identified and observations were made at each site. These observations suggest that site's 16JE127 and 16JE128 have

undergone few changes since they were last updated. Changes in the condition of site 16JE129 were more apparent. Much of the remains of the former sugar house are no longer intact and large sections of the structure have broken apart and large quantities of brick and brick rubble are now scattered along the shoreline. Apparently, the integrity of the structure is threatened by erosion. However, intact deposits appear to be present on the outer north wall of the structure. Other features previously recorded and still present at the site include a low spot which may represent the location of a former house site, drainage canals, and livestock fences. Not previously recorded but observed, were three linear vertical board features extruding from the ground along the shoreline immediately west of the structure remains.

4. Study Requirements. The evaluation will be conducted utilizing current professional standards and guidelines for both historical and archeological research including, but not limited to:

the National Park Service's National Register Bulletin 15 entitled, "How to Apply the National Register Criteria for Evaluation";

the Secretary of the Interior's Standards and Guidelines for Archaeology and Historic Preservation as published in the Federal Register on September 29, 1983;

Louisiana's Comprehensive Archaeological Plan, dated October 1, 1983;

The Advisory Council on Historic Preservation's regulation 36 CFR Part 800 entitled, "Protection of Historic Properties";

The work to be performed by the Contractor will be divided into three phases. Phase 1 will consist of background research. Phase 2 will consist of limited survey and site delineation. Phase 3 will consist of data analyses and report preparation.

a. Phase 1: Background Research. The Contractor shall commence, upon work item award, with a literature, map, and records review specific to the project area. This effort shall include literature review, review of recent shoreline studies and research of historical records, maps, photographs and archives to assist in the identification and documentation of areas where cultural resources are likely to occur within the project area. A comparison of modern v.s. historic canals will be conducted as part of this effort. Research will also provide a context for assessing the significance of all sites, found within the project area during phase 2.

b. Phase 2: Survey and Site Delineation. Phase 2 will consist of survey focusing on areas identified during Phase 1 which appear likely to contain cultural resources. The survey will be conducted in accordance with the Contractor's proposal and will include shovel testing or probing at 20 meter intervals, the use of metal detector, the use of other remote sensing apparatus, or other regimens, as appropriate.

Testing intervals will be reduced to further determine the nature and condition of any deposits identified as a result of the survey. A minimum three site's, including 16JE127 will be investigated in this manner. Locations of survey areas, in situ deposits, surface features, or disturbed portions of site's will be recorded and mapped in detail. Maps derived from compass and tape survey control will be acceptable for this effort.

Site delineation at 16JE129 will commence with the establishment of a grid over the site and tied to the Corps baseline. Utilizing shovel testing or probes, the Contractor shall determine the site boundaries (e.g. extent of in situ deposits), depth of deposit, and stratigraphy. The fieldwork will focus on the delineation of site boundaries with minimal effort expended on study of site stratigraphy. Any re-allocation of work must be approved in advance by the COR.

All areas investigated and all sites tested within project boundaries will be recorded (in ink) to scale on the appropriate USGS 7.5 minute quadrangle and project maps. The appropriate type and number of State site forms will be completed for any sites documented during these investigations. The USGS quadrangles will be used to illustrate site forms.

c. Phase 3: Data Analyses and Report Preparation. All data collected in conjunction with this investigation will be analyzed using currently acceptable scientific methods and will be conducted in accordance with the contractor's proposal. The Contractor shall catalog all artifacts, samples, specimens, photographs, drawings, etc. obtained during the course of the investigations, utilizing the format currently employed by the Louisiana State Archeologist. The catalog system will include site and provenience designations. The results of these analyses will be reported in full, in the written reports.

5. Unmarked Burials or Human Remains. In the event that evidence of an unmarked burial, human skeletal remains, or associated burial artifacts are encountered during the fieldwork, the provisions of the Louisiana Unmarked Human Burial Sites Preservation Act [Louisiana R.S. 8:671 through 681 and R.S. 36:209(I) and 802.13] shall apply. Activity that may disturb the remains shall cease

immediately and the Contractor shall notify the COR as soon as possible to determine the appropriate plan of action regarding the discovery.

6. Reports.

a. Management Summary. Two copies of a management summary will be prepared and submitted to the COR at the completion of the Phase 2 work effort. The management summary will serve as an interim document to immediately assist project planning. The report will summarize the completed work effort, identify areas investigated during Phase 2 and will provide descriptions and recommendations for any sites encountered as a result of the investigations.

b. Draft and Final Reports . The draft and final reports shall include all data and documentation in accordance with the Secretary of Interior's Standards and Guidelines (Section 4 above).

Five copies of a draft report, integrating all phases of this investigation will be submitted to the COR for review and comment 12 weeks after the date of the order. The final report shall follow the format set forth in MIL-STD-847A with the following exceptions: (1) separate, soft, durable, wrap-around covers will be used instead of self covers; (2) page size shall be 8-1/2 x 11 inches with 1-inch margins; (3) the reference format of American Antiquity will be used. Spelling shall be in accordance with the U.S. Government Printing Office Style Manual dated January 1973. The final report cover will conform to the New Orleans District Cultural Resource Report Series standards and specifications.

The COR will provide all review comments to the Contractor within 6 weeks after receipt of the draft reports. Upon receipt of the review comments on the draft report, the Contractor shall incorporate or resolve all comments and submit one preliminary copy of the final report to the COR within 3 weeks. Upon approval of the preliminary final report by the Contracting Officer's Representative, the Contractor will submit one reproducible master copy, one copy on floppy diskette, 40 copies of the final report, and all separate appendices to the COR within 24 weeks after date of order. A copy of the Scope of Services shall be bound as an appendix with the Final Report.

7. References.

Gagliano, Sherwood M., Richard A. Weinstein, Eileen K. Burden, Katherine L. Brooks, and Wayne Glander
1979 Cultural Resources Survey of the Barataria, Segnette, and Rigaud Waterways, Jefferson Parish, Louisiana.
Report submitted to the U.S. Army Corps of Engineers, New Orleans District.

Goodwin, R. Christopher, Jill-Karen Yakubik, Peter Gendel, Kenneth Jones, Debra Stayner, Cyd H. Goodwin, Galloway W. Selby, and Janice Cooper

1985 Preserving the Past For the Future: A Comprehensive Archeological and Historic Sites Inventory of Jefferson Parish, Louisiana. Volumes I-III. Report prepared for the Division of Archeology Department of Culture, Recreation and Tourism, Baton Rouge, Louisiana.

8. Attachments. Previously furnished.

Attachment 1. Description and location of the project area.

